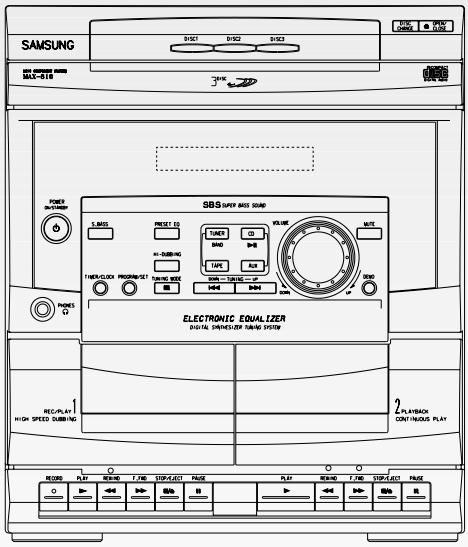
3 CD CHANGER
MINI MINI COMPONENT
MAX-810/818

SERVICE Manual

3CD CHANGER MINI COMPONENT



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ELECTRONICS

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1. Precautions

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced.

2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including control knobs and compartment covers.

3. Make sure that there are no cabinet openings through which people--particularly children--might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

4. Design Alteration Warning:
   Never alter or add to the mechanical or electrical design of the unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.

5. Leakage Current Hot Check (Figure 1-1):
   Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances*), and Underwriters Laboratories (*UL Publication UL1410, 59.7*).

   With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, etc.) and all exposed metal parts. Examples: Handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat.

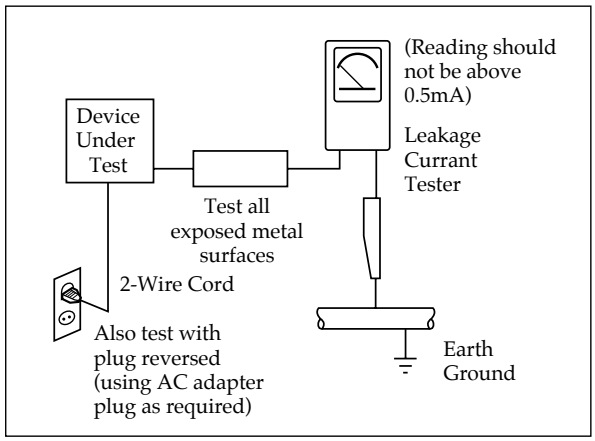

(Reading should not be above 0.5mA)
Device Under Test
Leakage Currant Tester
Test all exposed metal surfaces
2-Wire Cord
Also test with plug reversed (using AC adapter plug as required)
Earth Ground

Fig. 1-1 AC Leakage Test

6. Insulation Resistance Cold Check:
   (1) With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. (2) Set the power switch to ON. (3) Measure the resistance between the shorted AC plug and any exposed metallic parts. Example: Screwheads, antenna, control shafts or handle brackets.

   If any of the exposed metallic parts has a return path to the chassis, the measured resistance should be between 1 and 5.2 megohms. If there is no return path, the measured resistance should be "infinite." If the resistance is outside these limits, a shock hazard might exist. See Figure 1-2

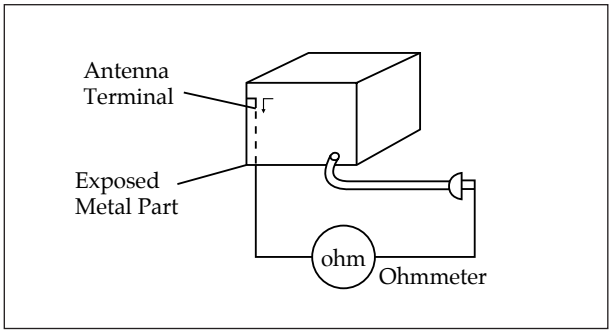


Fig. 1-2 Insulation Resistance Test

1-1 Safety Precautions (Continued)

7. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards

8. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that no wires or components touch thermally hot parts.

9. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original--even if the replacement is rated for higher voltage, wattage, etc.

10 Components that are critical for safety are indicated in the circuit diagram by shading, ⚠ or ⚠ . Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

Warning1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

1. Servicing precautions are printed on the cabinet. Follow them.

2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.

3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring may be clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.

4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.

5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).

6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

8. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs). Examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.

2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power--this is an electric shock precaution.)

3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.

4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.

5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.

6. Use only an anti-static solder removal device. Many solder removal devices are not rated as "anti-static" (these can accumulate sufficient electrical charge to damage ESDs).

7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

9. Minimize body motions when handing unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

1-4 Special Precautions and Warning Labels for Laser Products

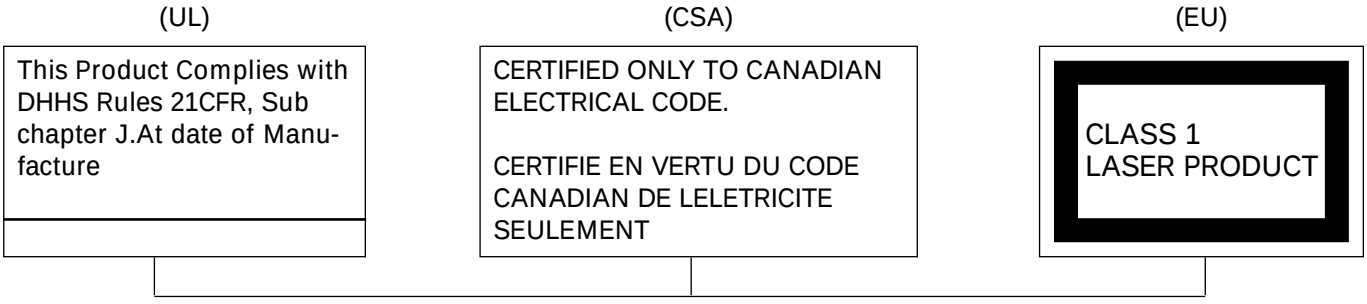

(UL)
This Product Complies with DHHS Rules 21CFR, Sub chapter J.At date of Manu-facture
(CSA)
CERTIFIED ONLY TO CANADIAN ELECTRICAL CODE.
CERTIFIE EN VERTU DU CODE CANADIAN DE LELETRICITE SEULEMENT
(EU)
CLASS 1
LASER PRODUCT

Fig. 1-3 Warning Labels (Location: Enclosure Block)

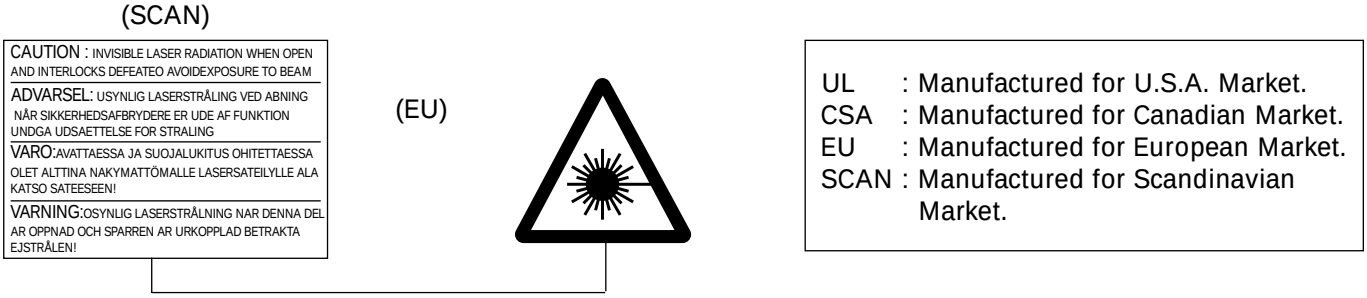

(SCAN)
CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATEO AVOIDEXPOSURE TO BEAM
ADVARSEL: USYNLIG LASERSTRÅLING VED ABNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGA UDSAETTELSE FOR STRALING
VARO:AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTINA NAKYMATTÖMALLE LASERSATEILYLLE ALA KATSO SATEESEEN!
VARNING:OSYNLIG LASERSTRÅLNING NAR DENNA DEL AR OPPNAD OCH SPARREN AR URKOPPLAD BETRAKTA EJSTRÅLEN!
(EU)
UL : Manufactured for U.S.A. Market.
CSA : Manufactured for Canadian Market.
EU : Manufactured for European Market.
SCAN : Manufactured for Scandinavian Market.

Fig. 1-4 Warning Labels (Location: Disc Clamper, Inner Side of Unit Door or Nearby Unit Chassis)

1-4 Special Precautions and Warning Labels for Laser Products (Continued)

1-4-1 Warnings

1. When servicing, do not approach the LASER exit with the eye too closely. In case it is necessary to confirm LASER beam emission, be sure to observe from a distance of more than 30 cm from the surface of the objective lens on the optical pick-up block.

2. Do not attempt to handle the objective lens when the DISC is not on the tray.

1-4-2 Laser Diode Specifications

Material: GaAs+ GaAlAs
Wavelength: 760-800 nm
Emission Duration: Continuous

Laser Output: 0.2 mw (measured at a 1.6 mm distance from the objective lens surface on the optical pick-up block.)

1-4-3 Handling the Optical Pick-up

1. Static electricity from clothing or the body may cause electrostatic breakdown of the laser diode in the Optical Pickup. Follow this procedure:

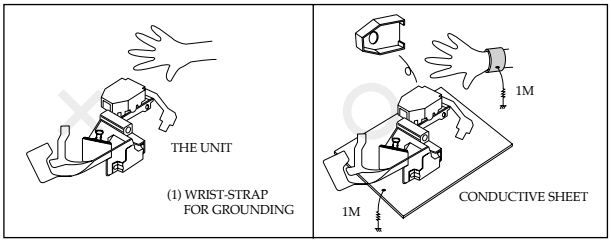
2. Place a conductive sheet on the work bench (i.e., the black sheet used for wrapping repair parts.) Note: The surface of the work bench should be covered by a copper ground plane, which is grounded.

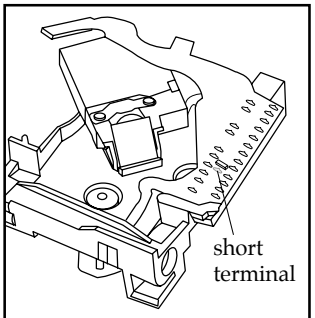
3. The repair technician must wear a wrist strap which is grounded to the copper sheet.

4. To remove the Optical Pickup block: Place the set on the conductive sheet, and momentarily touch the conductive sheet with both hands. (While working, do not allow any electrostatic sources--such as clothes--to touch the unit.)

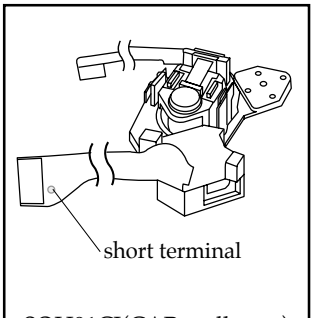
5. Ground the "Short Terminal" (located on the PCB, inside the Pickup Assembly) before replacing the Pickup. This terminal should be shorted whenever the Pickup Assembly is lifted or moved.

6. After replacing the Pickup, reopen the Short Terminal. See diagrams below:

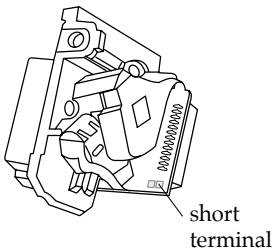




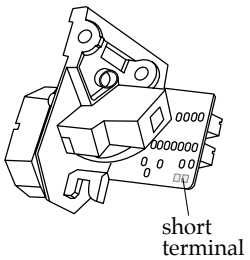
SOH91VI(LDP)



SOH91CI(CAR,walkman)



SOH-A1
(CMS-V10,CMS-V30)



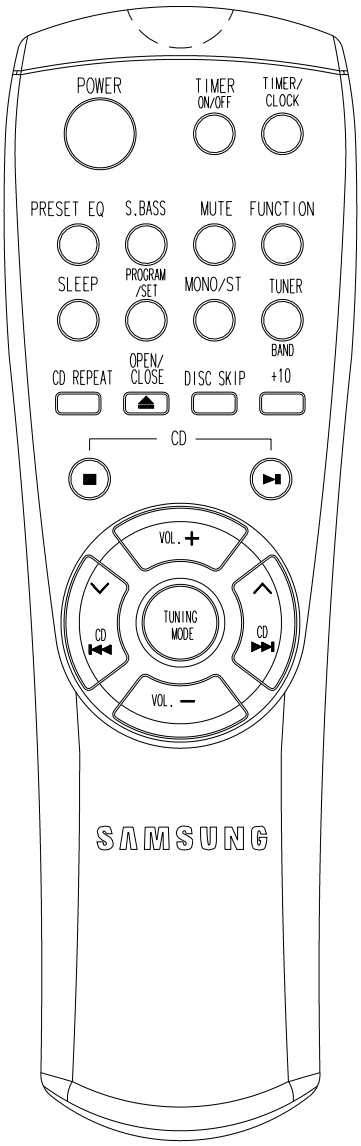
SOH94T4N
(CMS-V10,CMS-V30)

2. Product Specfications

General		Power source Power consumption Dimensions (mm)	AC 230V 50HZ (option) 160W 270(W) x 317(H) x 340(D)
Amp		Power output (Front) Total harmonic distortion Frequency range Signal to noise ratio Channel separation Input sensitivity Mic Aux	40W / Ch(6Ω) (THD 10%) 0.08% (1kHz) 36Hz ~ 25kHz 75 dB 50 dB 4mV (±3) 400mV (±80)
Tuner	FM	Frequency range Usable sensitivity Signal to noise ratio IF rejection ratio Total harmonic distoration Separation (Stereo)	87.5 ~ 108MHz 10 dB 62 dB 60 dB 0.2% 28 dB
	MW (AM)	Frequency range Usable sensitivity Signal to noise ratio IF rejection ratio Total harmonic distortion	522 ~ 1611KHz 54 dB 40 dB 30 dB 2%
	LW (option)	Frequency range Usable sensitivity Signal to noise ratio	146 ~ 290KHz 60 dB 35 dB
Cassette		Frequency range WOW FLUTTER Erasing effect Signal to noise ratio Total harmonic distortion	125Hz ~ 8KHz(±6dB) 0.15% 60 dB 45 dB 2.5%
Compact Disc		Frequency response Signal to noise ratio Channel separation Total harmonic distortion Audio Output	20Hz ~ 20KHz(±1dB) 90 dB(1kHz) 75 dB(1kHz) 0.1% (100Hz) 0.05%(1kHz) 0.2% (10kHz) 1V (1kHz 0dB)

Specifications are subject to change without notice.

Remote Control



3. Disassembly and Reassembly

3-1 Cabinet-Top

1. Remove 11 screws holding the Cabinet-Top.
2. Lift the back of the Cabinet-Top and slide it to the rear to remove.

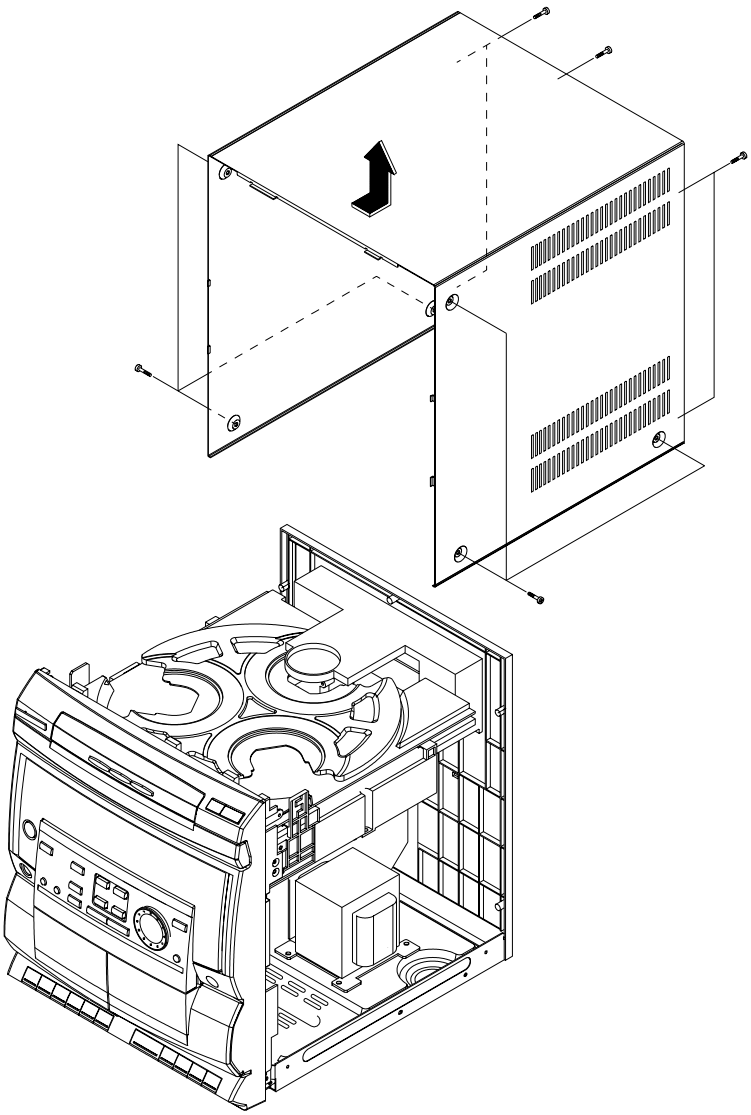


Figure 3-1

3-2 CD-Mecha, Door-CD

1. After power is connected :
   - Turn power on
   - Open the tray using the open/close key
2. After power is not connected :
   - Turn the Gear clockwise using the hand as shown in figure 3-2-1.
   - Pull the Tray in the direction of arrow ②.
3. Remove 4 screws ④,⑤ and lift the CD-Mecha.

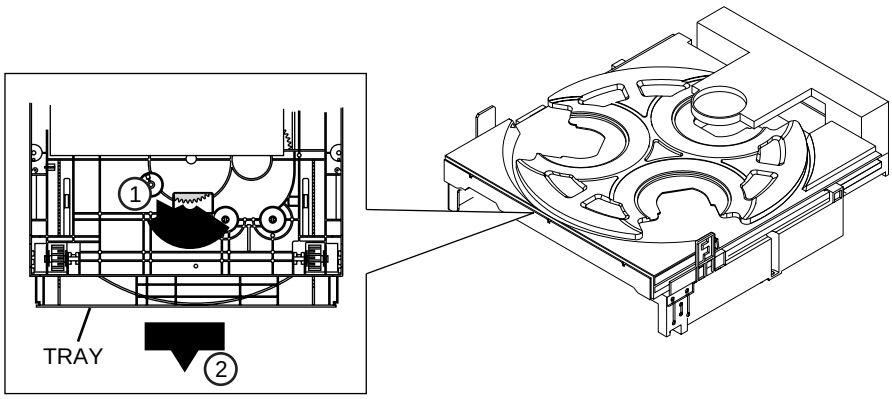


Figure 3-2-1

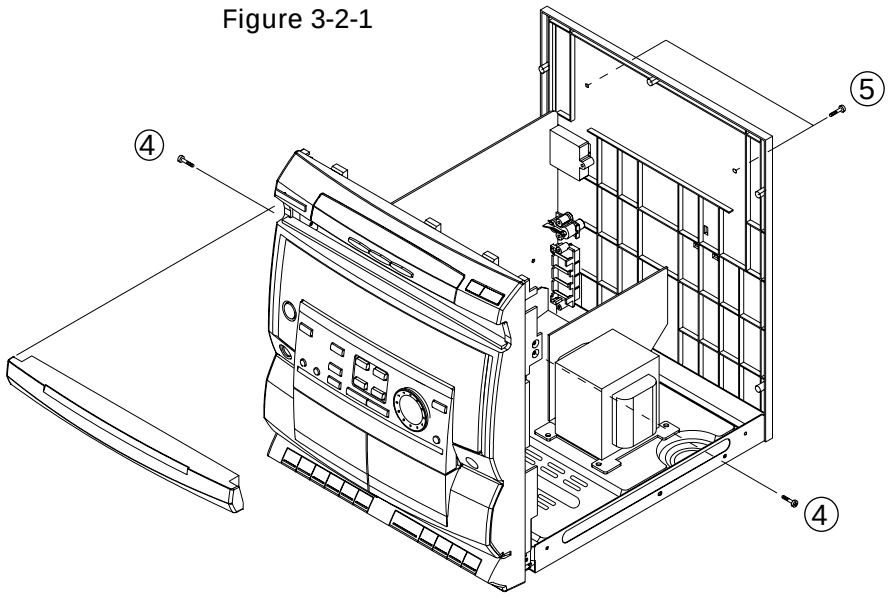


Figure 3-2

3-3 Cabinet-Rear and Main PCB

1. Remove 7 screws ⑤ and then lift the Cabinet-Rear ⑥ and slide it to rear to remove (see arrow).
2. Remove the Main-PCB ⑦.

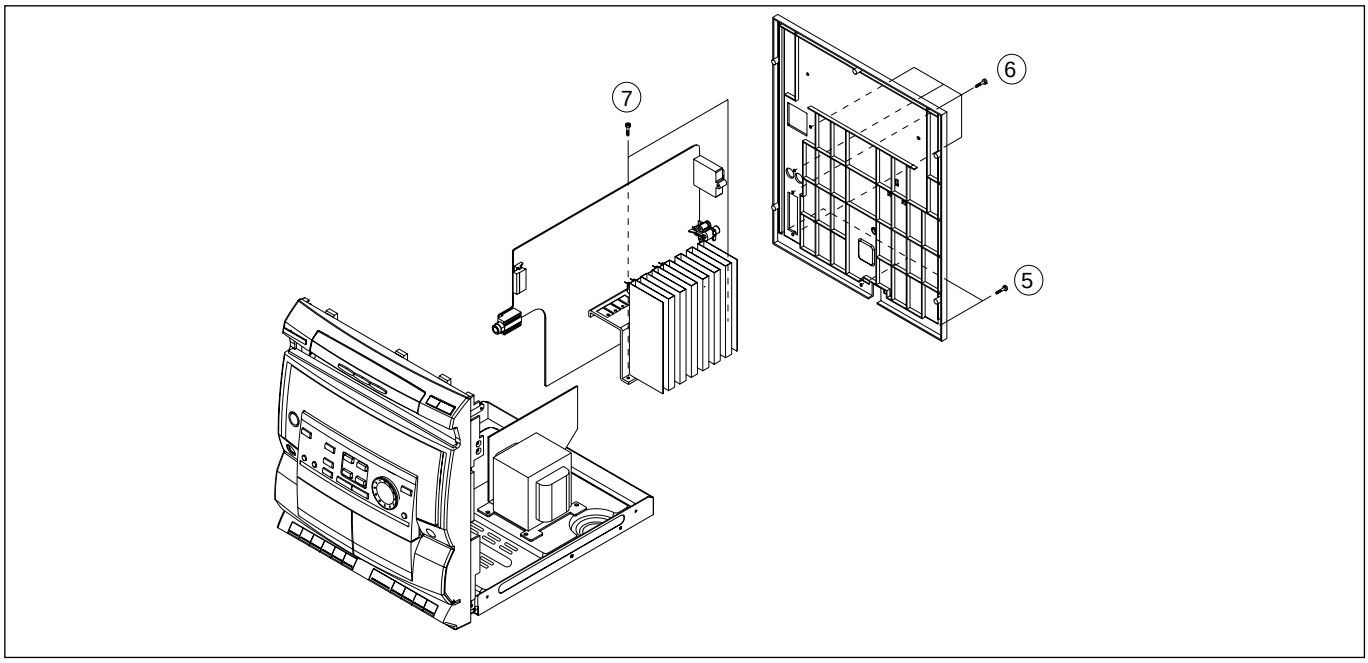


Figure 3-3

3-4 Cabinet-Front and Cabinet-Bottom

1. Remove 3 screws ⑧.
2. Remove the Cabinet-Rear by pushing the "A" and "B" as shown.

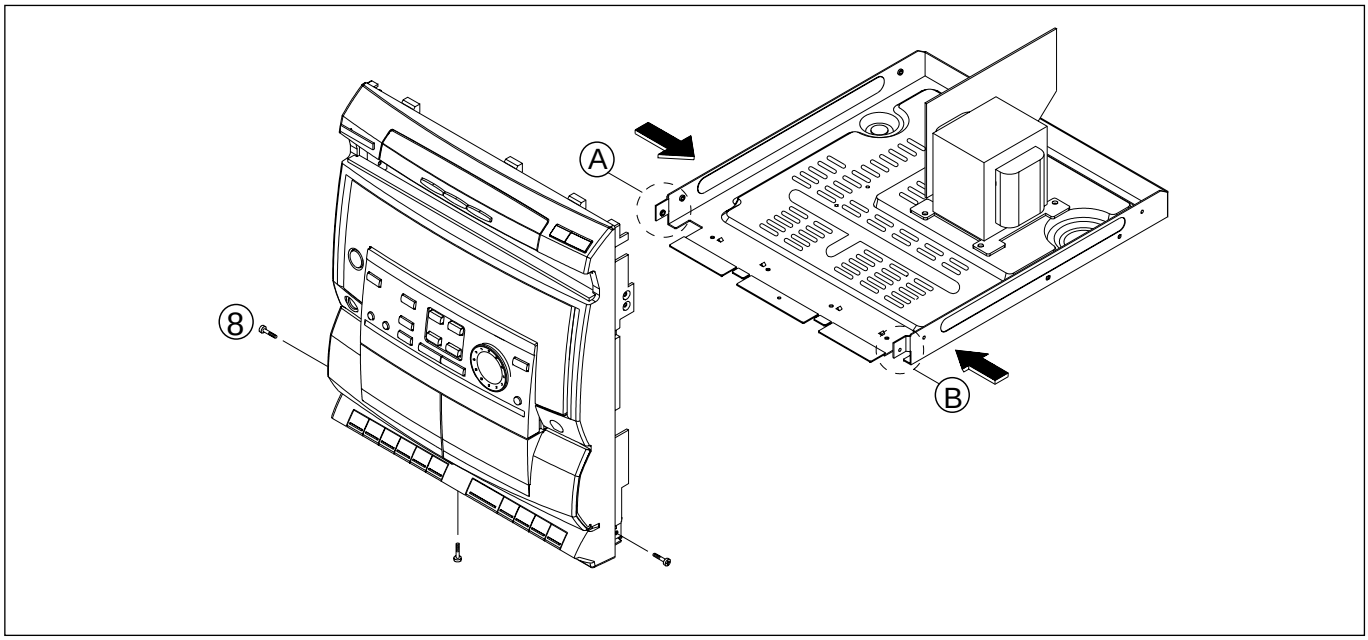


Figure 3-4

3-5 CD Mecha

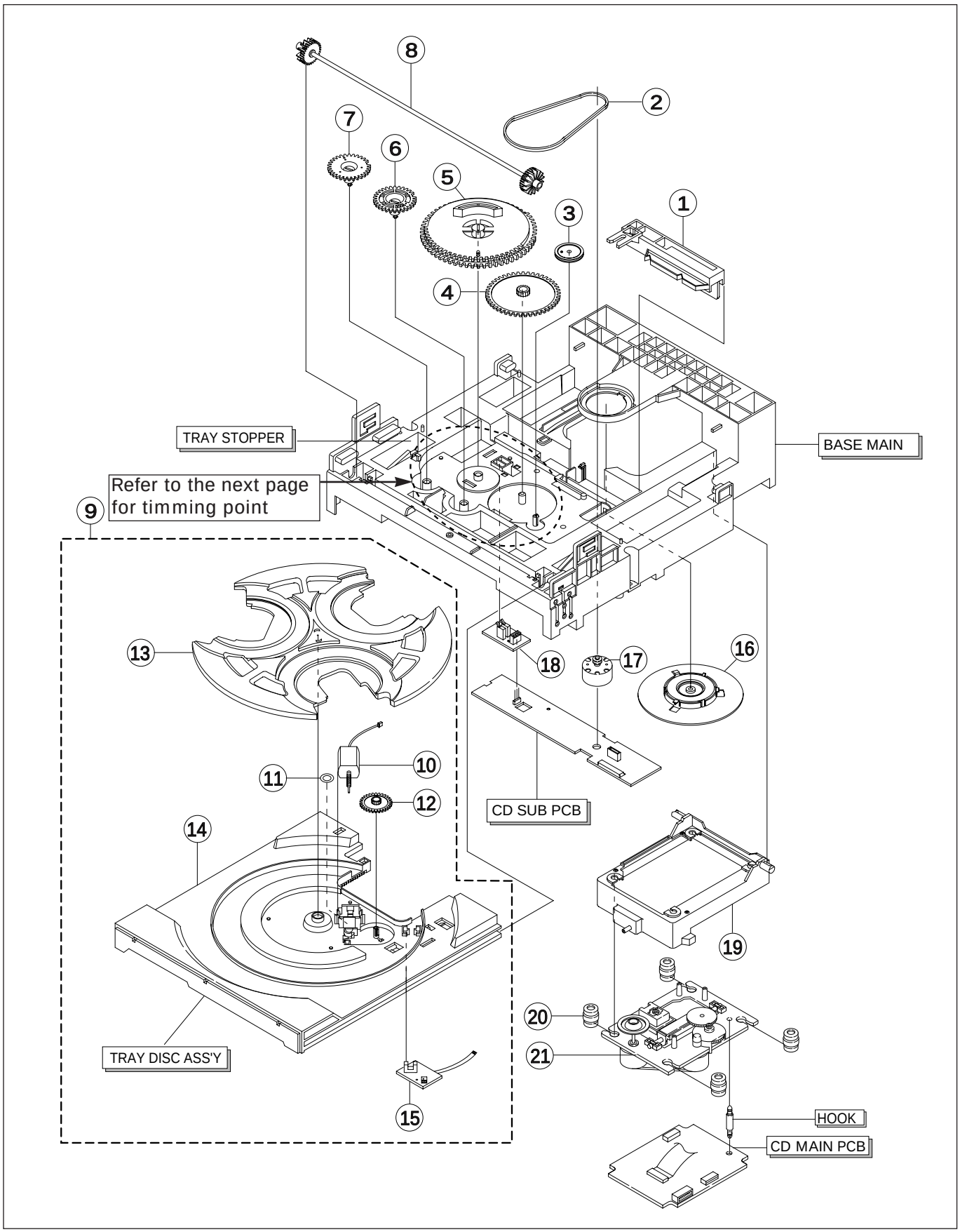


Figure 3-5

3-5 CD Mecha Continued

*When removing, take extreme care not to damage the hook.
1. Open the Tray Disc Ass'y by turning the Gear-Load(⑤) in the direction of open,then remove the Wire-Tray(㉕).
2. Remove two Tray-Stopper and tray.

3-5-1 Tray Disassembly

1. Remove the Tray-Roulette(⑬) from the Tray-Disc Ass'y(⑭) by releasing the hook.
2. Remove the PCB-Sensor Ass'y(⑮) from the tray by releasing the hook.
3. Remove the Worm-Motor Ass'y(⑩)from the Tray-Disc Ass'y(⑭).
4. Remove the Cushion-Motor(⑪) from the Tray.
5. Remove the Gear-Roulette(⑫) from the Tray-Disc Ass'y(⑭) by releasing the hook.

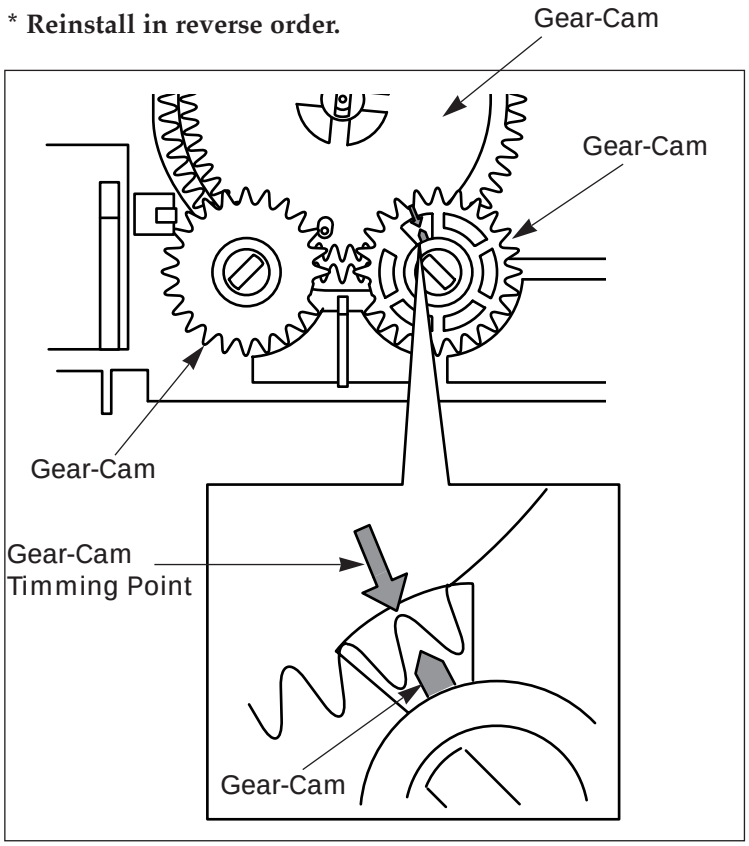
3-5-2 Main Disassembly

1. Remove the Table-Chuck Ass'y(⑯) from the Base-Main by turning it.
2. Push the Slider-Cam(①)towards right, then lift it up to remove.
3. Remove the Gear-Tray(⑥) from the Base-Main by releasing the fixed hook.
4. Remove the Gear-Converter(⑦)from the Base-Main by releasing the fixed hook.
5. Remove the Gear-Cam(⑤) from the Base-Main by releasing the fixed hook.
6. Remove the Belt(②) from the Pulley-Motor Ass'y(⑰) & the Gear-Pulley(③).
7. Remove the Gear-Pulley(③) from the Base-Main by releasing the fixed hook.
8. Remove the Gear-Load(④).
9. Remove the Gear-Synchro(⑧).
10. Desolder two soldering points of the CD SUB PCB, then remove it from Base-Main by releasing the hook.
11. Remove the Pulley-Motor Ass'y(⑰) by releasing the hook.
12. Remove the PCB-SW Ass'y(⑱) by releasing the hook.

3-5-3 CD Main PCB Disassembly

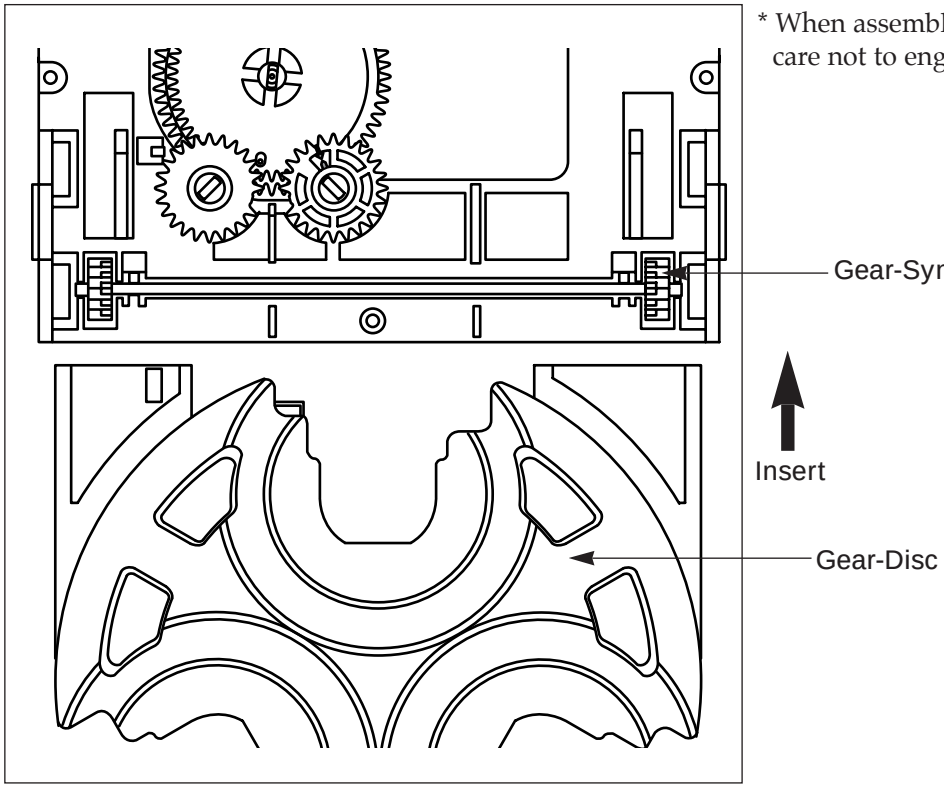
1. Remove the Lever-Lifter(⑲) from the Base-Main by releasing two hooks.
2. Remove four Rubber-CD(⑳) from the Lever-Lifter and then remove the Deck-CD(㉑).
3. Remove the Hook.
4. Remove the CD MAIN PCB with the soldering iron.

*** Reinstall in reverse order.**



* Align the Gear-Cam with the Gear-Tray as shown ing Figure 3-6, then mount the Tray-Disc.

Figure 3-6



* When assembling the Tray-Disc,take extreme care not to engage with Gear-Synchro.

Figure 3-7

3-6 CD Deck

1. Remove the Shaft ①.
2. Lift the P/U ②.
   Note : Take extreme care not to touch the surface of lens.
3. Lift the Center-ring ③.
4. Remove the Spring-T/Table ④.
5. Remove the Turn-Table (M) ⑤.
6. Remove 2 screws ⑥ and then remove the Spindle-Motor ⑦.
7. Remove the Cover-Gear ⑧ by pushing the hook.
8. Remove the Gear (c) ⑨ by pushing the hook.
9. Lift the Gear(b) ⑩.
10. Remove the Gear(a) ⑪.
11. Remove 2 screws ⑫ and the then remove the Feed-Motor ⑬.
12. Remove the Chassis-Deck (M) ⑭.

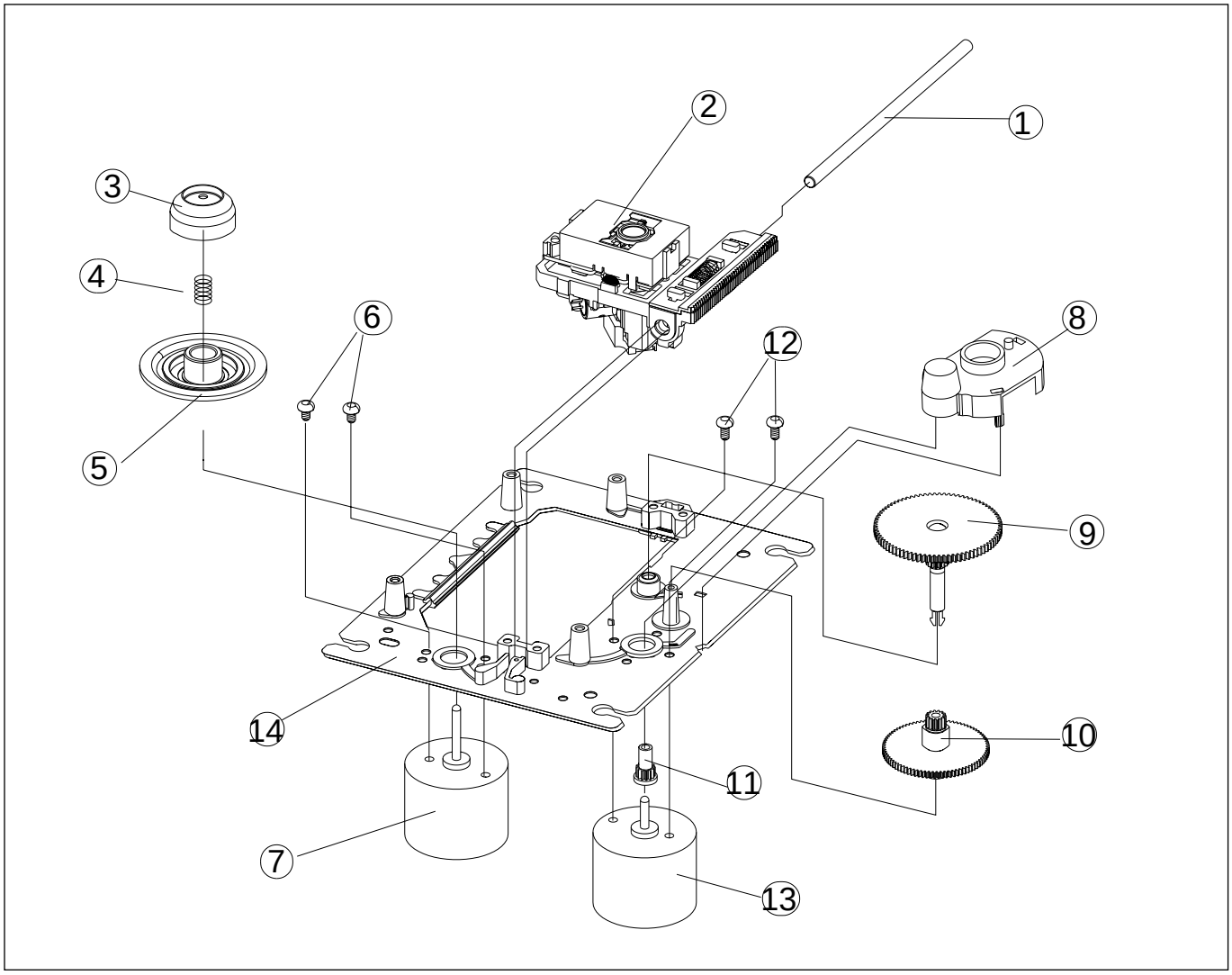
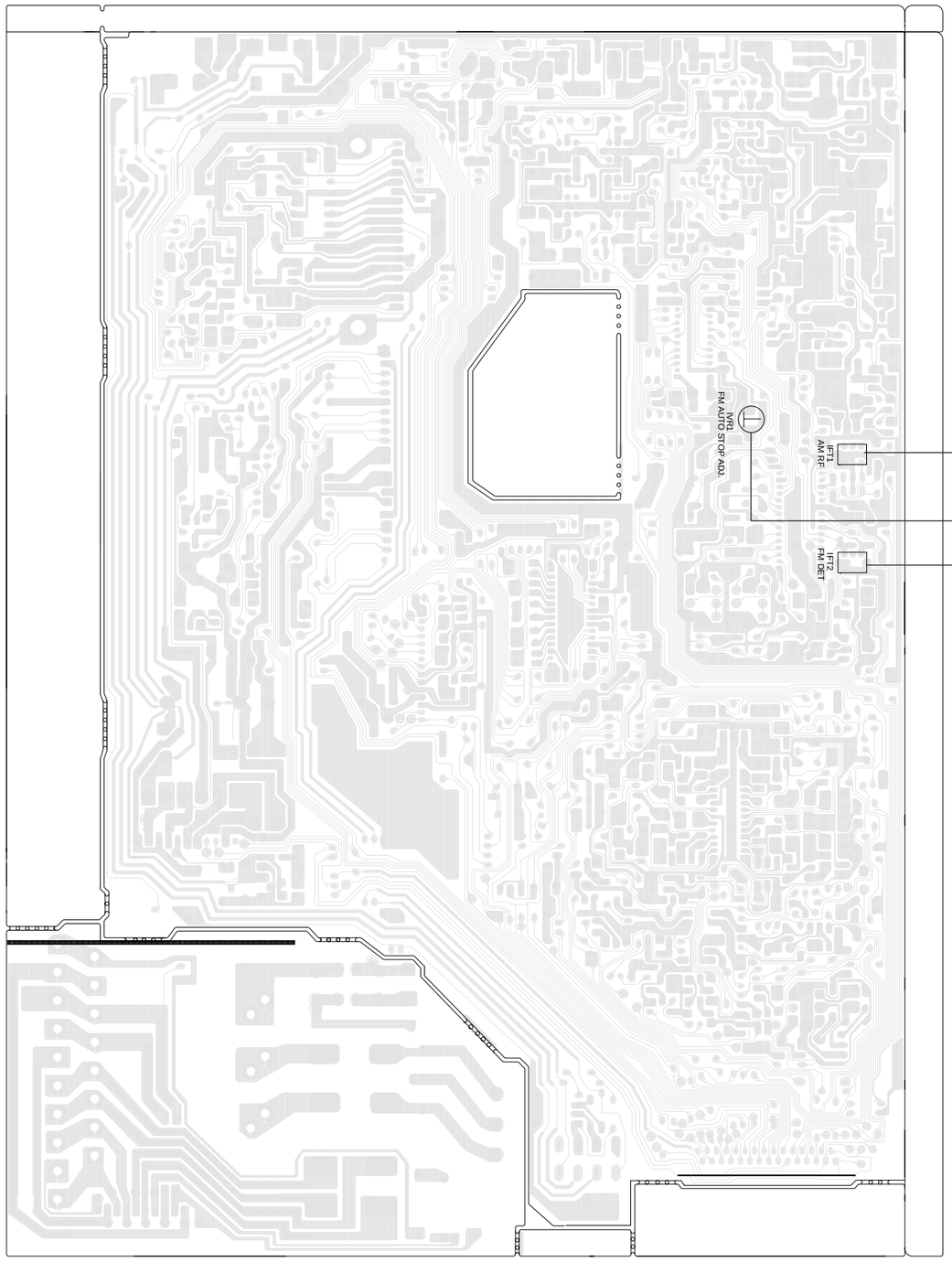


Figure 3-8

4. Alignment and Adjustments

4-1 Tuner



* When adjusting T.H.D., readjust I/F coil on the Tuner Pack.

FM THD Adjustment	
SSG FREQ.	98 MHz
Adjustment point (IFT2)	FM DETECTOR COIL
Output	60 dB
Minumum Distortion (0.3% below) (Figure 4-1)	

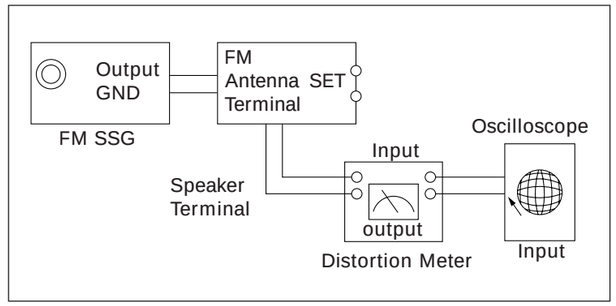


Figure4-1 IF CENTER and THD Adjustment

FM Search Level Adjustment	
SSG FREQ.	98 MHz
Adjustment point (IVR1)	BEACON SENSITIVITY SEMI-VR(5KΩ)
Output	450kHz
Adjust IVR1 so that “TUNED” of FLT is lighted (Figure 4-2)	
4Gain : 20dB(CE standard)	

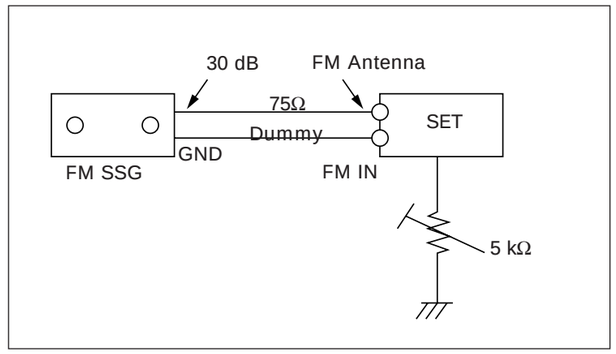


Figure4-2 FM Auto Search Level Adjustment

AM(MW) I.F Adjustment	
SSG FREQ.	450 kHz
Frequency	522 kHz
Adjustment point (IFT1)	AM I.F COIL
Maximum output (Figure 4-3)	

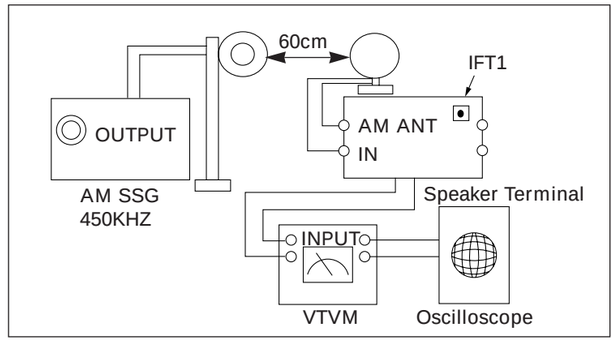


Figure4-3 AM I.F Adjustment

4-2 Cassette Deck

4-2-1 To Adjust Tape Speed

Notes

* Measuring tape: i) MTT-111 (or equivalent)
(Tapes recorded with 3kHz)
ii) MTT-5512 (or equivalent)

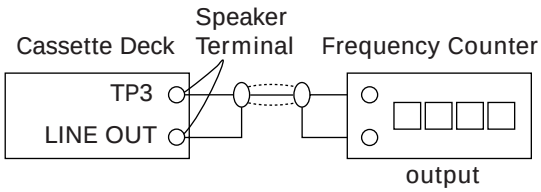


Figure 4-4

Step	Item	Tape	Location no.	Standard	Figure	Remark
1	NOR SPEED Control	MTT-111(3KHZ)	JVR1	3000 ±30kHZ	Fig. 4-4	A&B Deck deviation : 60Hz
2	HI SPEED Control	MTT-111(3KHZ)	No Adjustment	-	Fig. 4-4	5200~6600Hz Check

Step	Item	Tape	Location no.	Frequency Range	Figure	Remark
1	L,R Unbalance	MTT-112B(1KHZ)	JVR3R	3000 ±30KHZ	Fig. 4-5	VTVM (A-DECK)
2	Record Frequency	MTT-5512	JL3	85KHZ±1KHZ	Fig. 4-5	JR30

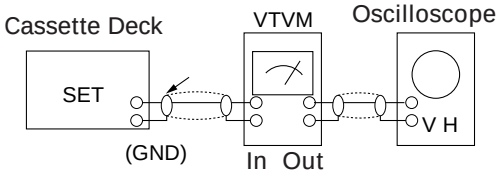


Figure 4-5

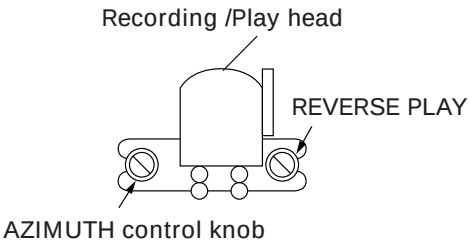


Figure 4-6

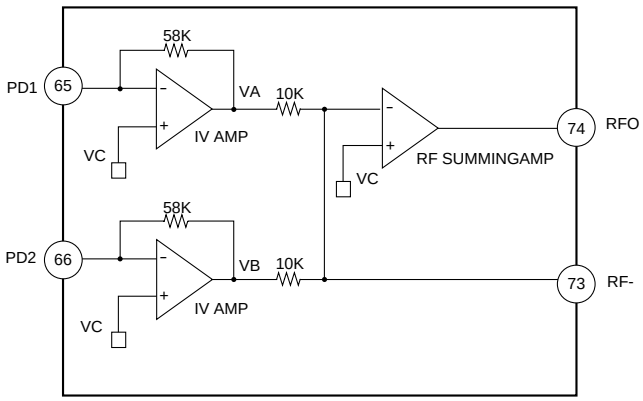
Step	Item	Tape	Location no.	Standard	Figure	Remark
1	Azimuth	MTT-111CN	HEAD	8KHZ	Fig. 4-6	Output:Maximum

5. Special Circuit Descriptions

5-1 RF Amp Block

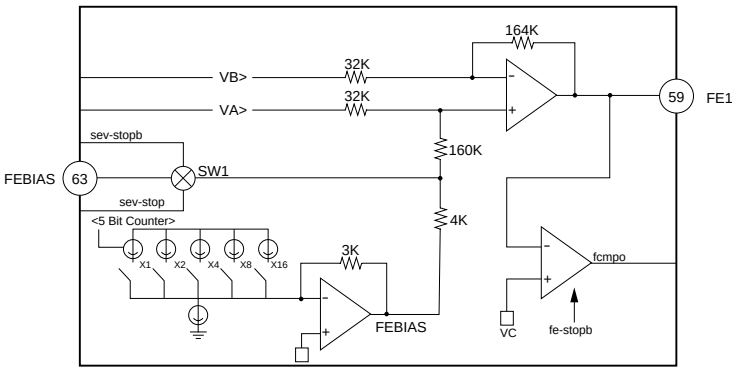
5-1-1 RF Amplifier

The two currents from input pins PD1 (A+C) and PD2 (B+D) are converted into voltages through I/V Amp, and they are added to RF summing Amp. The photo diode (A+B+C+D) signal which is I-V changed is outputted by RFO (pin74). At this pin, the eye pattern can be checked.



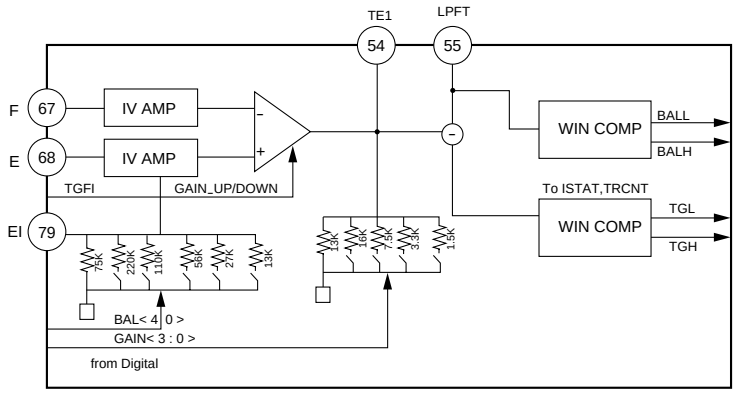
5-1-2 Focus Error Amp

The output of the focus error amp is the difference between RF I-V AMP(1) output Va and RF I-V AMP(2) output Vb,just is the Photo Diode ((A+C) - (B+D)) signal which is I-V changed.
The focus error bias voltage applied to the (+) of focus error amp can be changed by D/A converter as shown in diagram, so that the offset of focus error amp can be adjust automatical.
Focus error bias can be adjusted from the range of +100mV ~ -100mV by connectiong the resistor with pin 63 (FEBIAS).



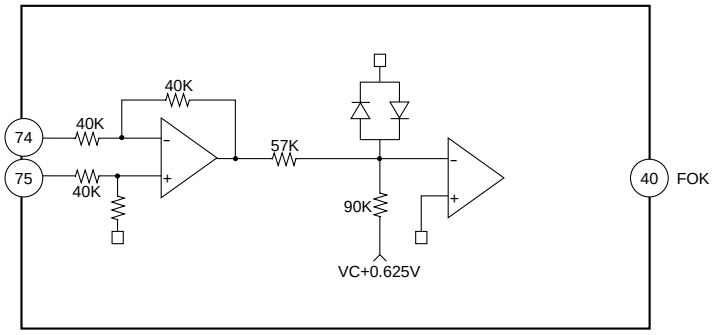
5-1-3 Tracking Error Amp

The current signals from the side spot photo diode (E and F) are input to the E and F pin and converted into voltage signals by E I-V and F I-V AMP. The output of tracking error amp is due to the difference between E I-V AMP voltage output.
The E-F balance can be adjusted by modifying the gain of E I-V AMP, and the tracking gain(Pin TE1) can be adjusted automatically by micom program.



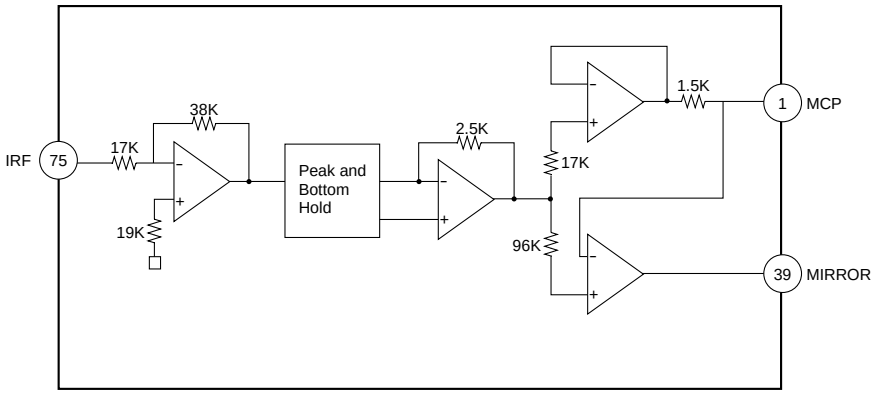
5-1-4 Focus OK Circuit

Extracting the DC part of RFI and RFO and comparing with the basic DC level, if RF Level is more than basic level, the FOK is output. The focus OK circuit generates a timing window of focus on to monitor the focus search status of focus serve.



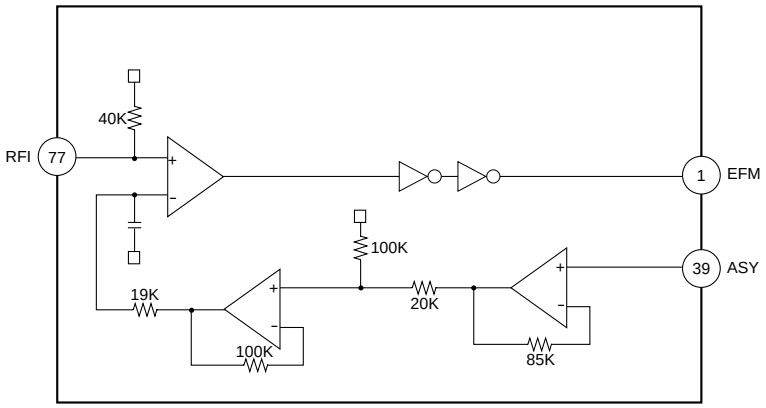
5-1-5 Mirror Circuit

After RFI signal is amplified by mirror amp, mirror signal is held in peak and bottom circuit. The following of 100KHZ traverse is possible in peak hold circuit and the loss of track count due to defect is counted in bottom hold circuit. Mirror output beyond 2KHz is. “L” at track on disc, “H” at interval between track on disc, “H” when the defect beyond 1.4ms is detected.
The time constant for the mirror hold must be sufficiently large than of the traverse signal



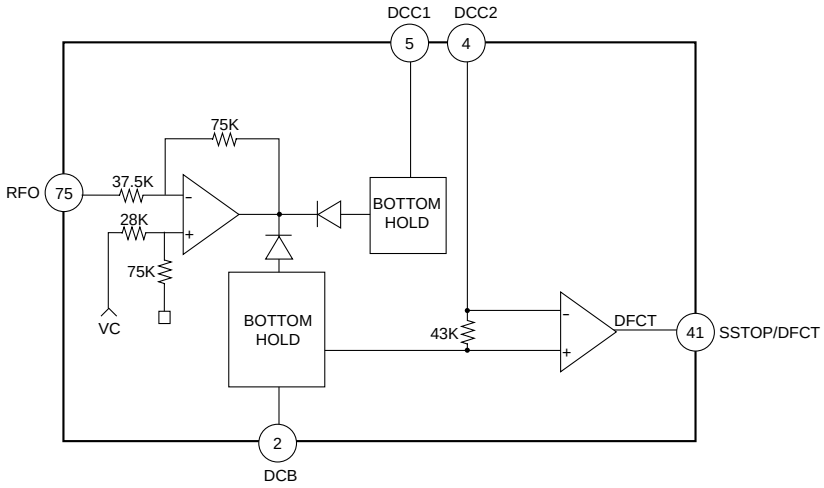
5-1-6 EFM Comparator

The EFM comparator converts a RF signal into a binary signal
As the asymmertry due to variations in disc manufacturing can not be eilminated by thr AC coupling alone, the reference voltage of EFM comparator is controlled utilizing the fact that the generation probability of 1,0 50% each in the binary EFM signals.



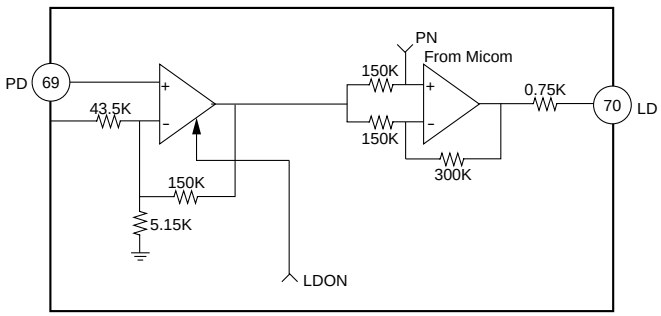
5-1-7 Defect Circuit

The RFO signal bottom, after being inverted, is held with two time constant of long and short. The short time-constant bottom hold is done for a disc mirror defect more than 0.1msec, the long time-constant bottom hold is done with the mirror level prior to the defect. By differentiating this with a capacitor coupling and shifting the level, both signals are compared to generate the mirror defect detection signal.



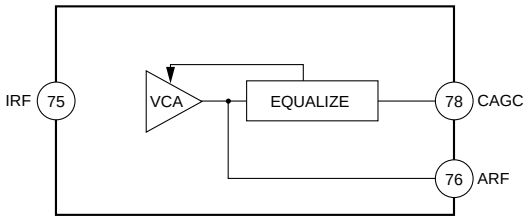
5-1-8 APC Circuit

As the laser diode has large negative temperature characteristic in its optical output when driven with a constant current on laser diode. Therefore, the output on processing monitor photo diode, must be a controlled current for getting regularly output power, thus the APC (Auto Power Control) circuit is composed.



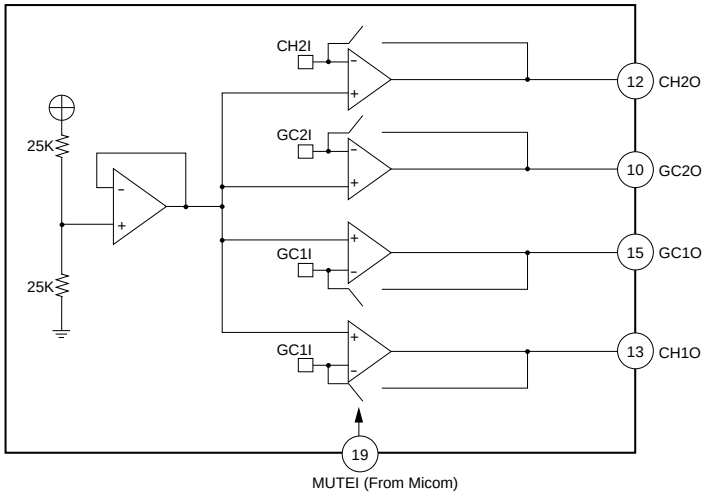
5-1-9 AGC Stability Circuit

The gain is adjusted by AGC Block with the function of maintainning the definite RF peak to peak level, after the operation of RF envelop detection and comparing with reference voltage.
RFO level is kept stable in 1Vp-p, and input to EFM Slice.



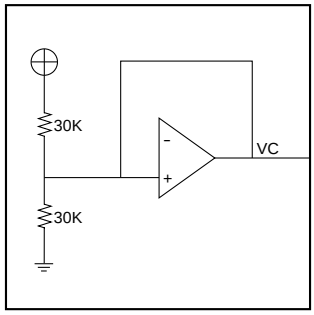
5-1-10 Post Filter

The adjustment of audio output gain and the integration of possible de-emphasis output are executed by the low pass filter. If the control by MUTE signal from micom exist, and when input signal absent, two channel of right and left is builted in.



5-1-11 Center Voltage Generation Circuit

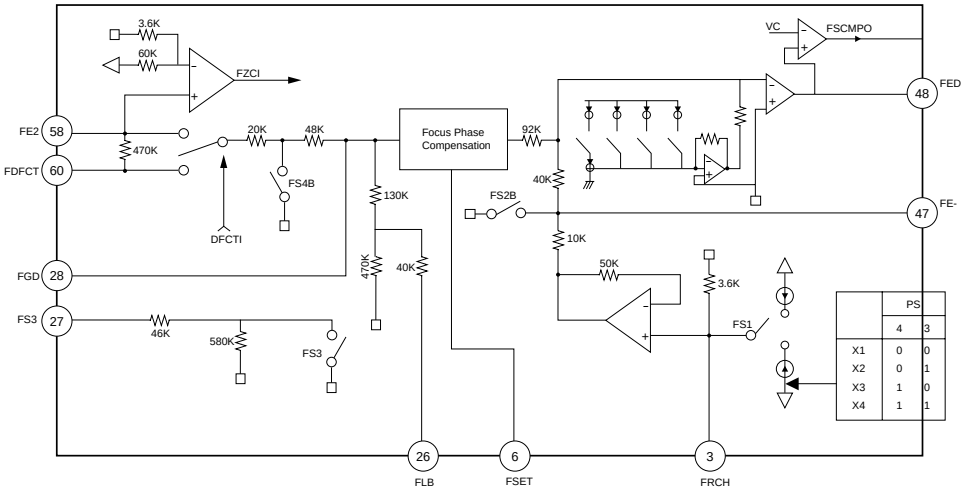
The Center Voltage is generated by using resistor dividing voltage.



5-2 Servo Block

5-2-1 Focus Servo Block

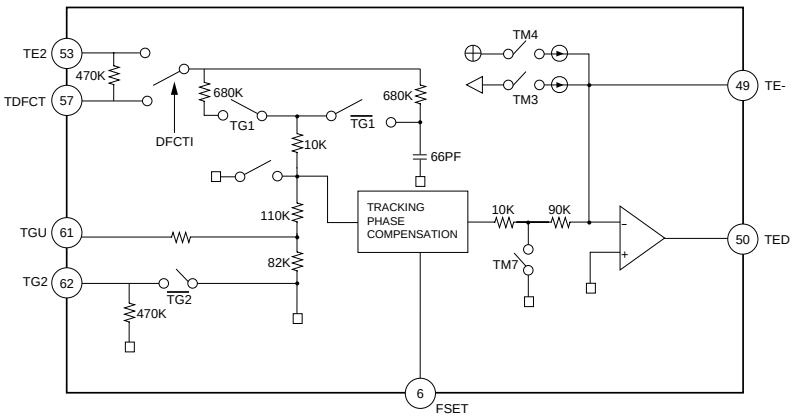
When defect="H (the defect signal is detected), the focus servo loop is muting in case of focus phase compensation. At this time, the focus error signal is outputted through the low pass filter formed by connecting a capacitor(0.1μF) and a built-in 470KΩ resistor to the FDFCT pin (pin60). Accordingly, the focus error output is held as the error value just before defect error during defect occuring. The peak frequency of focus loop phase compensation is at about 1.2KHz when the resistor connected to FSET pin(pin6) is 510kΩ, and it is inversely proportional to the resistor connected to the FSET pin. While the focus search is operating, the FS4 switch is on and then focus error signal is isolated, accordingly the focus search signal is output by FEO pin(pin48). When the FS2 switch is on(focus on), the focus servo loop is on and the focus error signal from FE2 pin(pin58) is outputted through the focus servo loop.



5-2-2 Tracking Servo Block

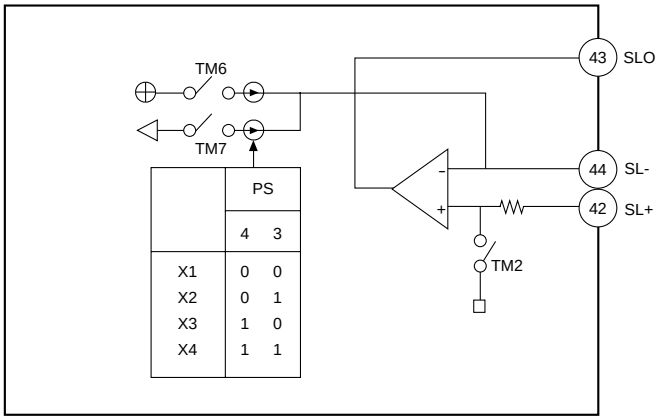
During detection of defect, the tracking error signal is output through the tracking servo loop after through the low pass filter formed by connecting a capacitor(0.1μF) and a built-in 470KΩ resistor to the TDFCT pin(pin57) in case of tracking phase compensation. The value of tracking gain up/down can be controlled by TGU and TG2 pin. The peak frequency of tracking loop phase compensation, the dynamic range and offset of op amp can be adjusted by changing the value of resistor connected to FSET pin same as focus loop. In case of unstable status of actuator after jumping, the ON/OFF of tracking loop is controlled by TM7 switch of break circuit.

After 10-track jumping, servo circuit gets out of the liner range and actuator,s tracking is unstable occasionally. Accordingly, unnecessary jumping with many tracking error should be prevented.



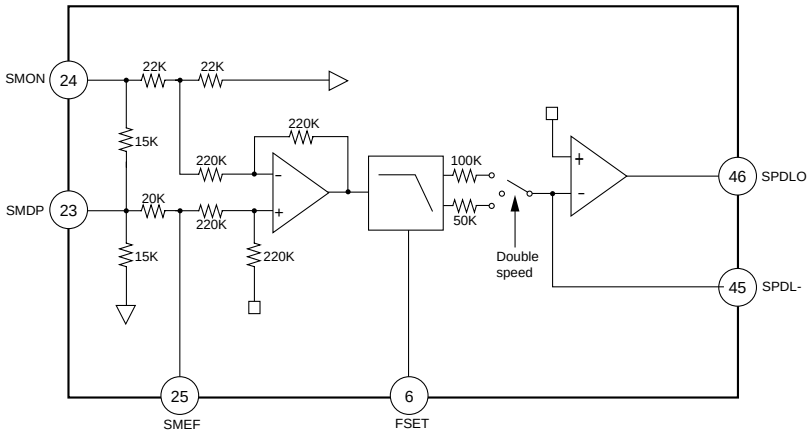
5-2-3 Sled Servo Block

The moving of pick-up is controlled by tracking servo output through low pass filter.
The sled kick voltage is output for track jump operation.



5-2-4 Spindle Servo Block

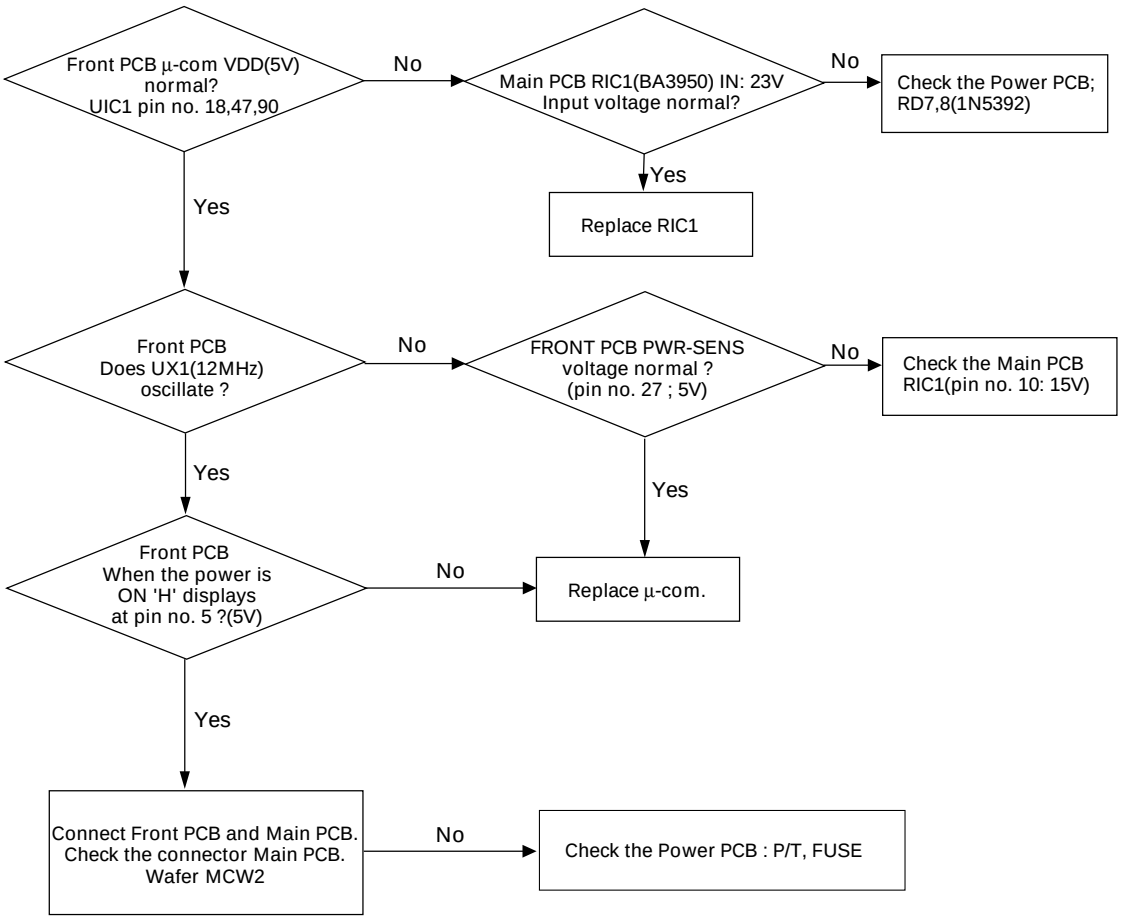
The 20KΩ resistor and 0.33μF capacitor form the 200Hz low pass filter, and the carrier component of spindle servo error signals is eliminated. In CLV-S mode, SMEF becomes "L" and pin 25 low pass filter fc lowers, strenthening the filter further. The characteristics of high frequency phase compensation in focus tracking servo and the characteristics of cut off frequecny in CLV low pass filter are test by FSET pin.



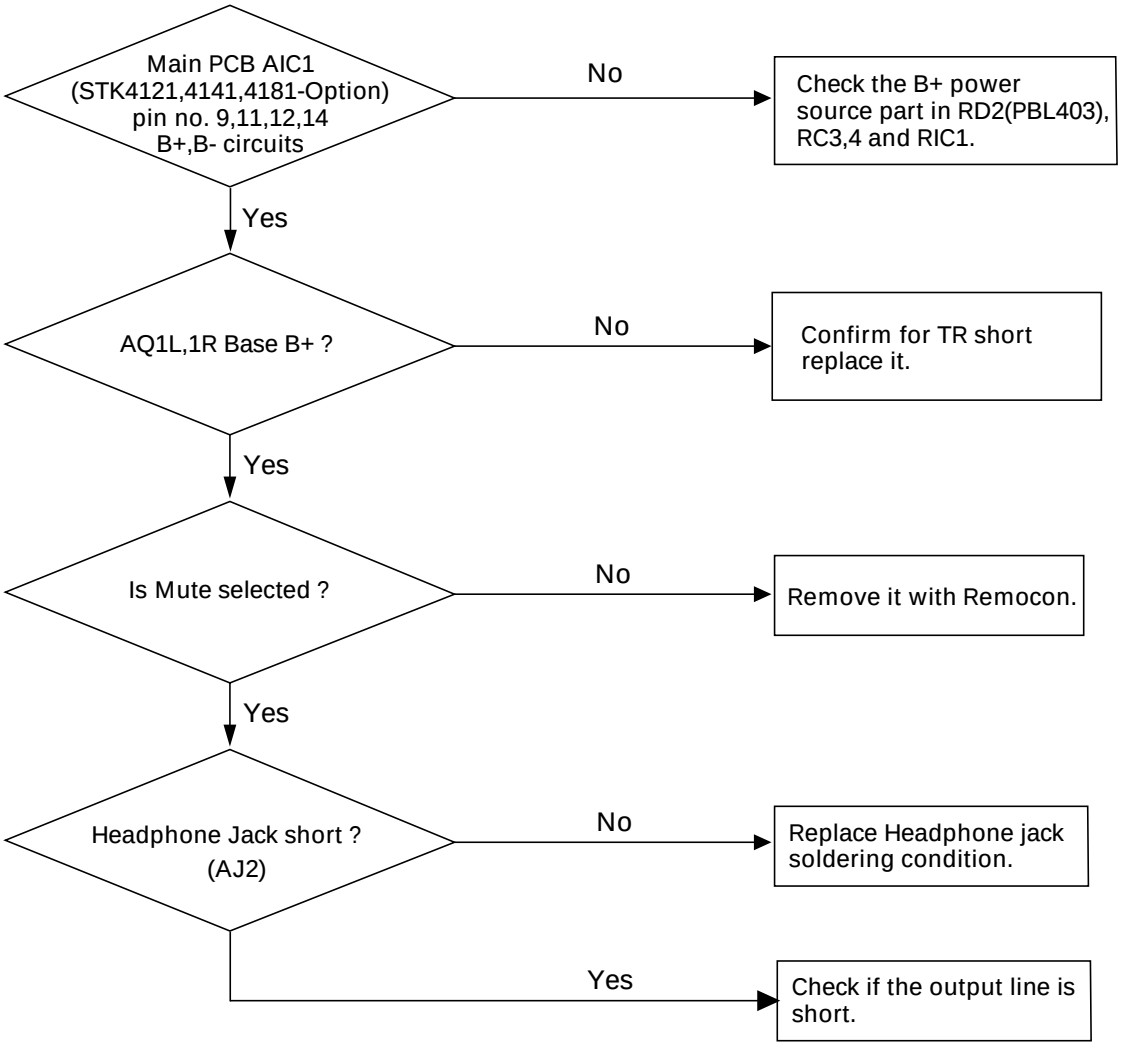
6. Troubleshooting

6-1 Amplifier

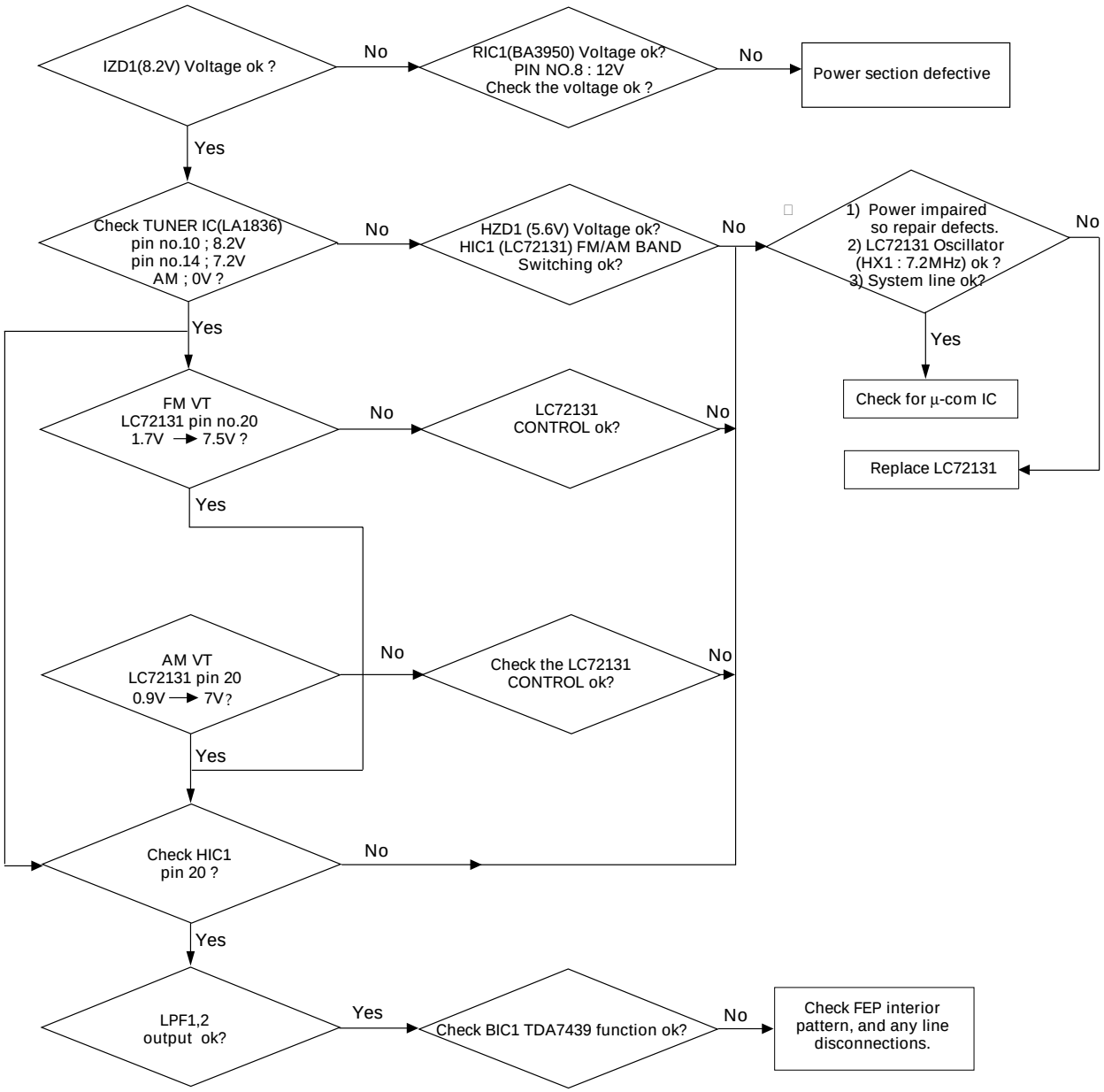
6-1-1 Power Malfunction


Front PCB μ-com VDD(5V) normal? UIC1 pin no. 18,47,90
No
Main PCB RIC1(BA3950) IN: 23V Input voltage normal?
No
Check the Power PCB; RD7,8(1N5392)
Yes
Replace RIC1
Yes
Front PCB Does UX1(12MHz) oscillate ?
No
FRONT PCB PWR-SENS voltage normal ? (pin no. 27 ; 5V)
No
Check the Main PCB RIC1(pin no. 10: 15V)
Yes
Yes
Front PCB When the power is ON 'H' displays at pin no. 5 ?(5V)
No
Replace μ-com.
Yes
Connect Front PCB and Main PCB. Check the connector Main PCB. Wafer MCW2
No
Check the Power PCB : P/T, FUSE

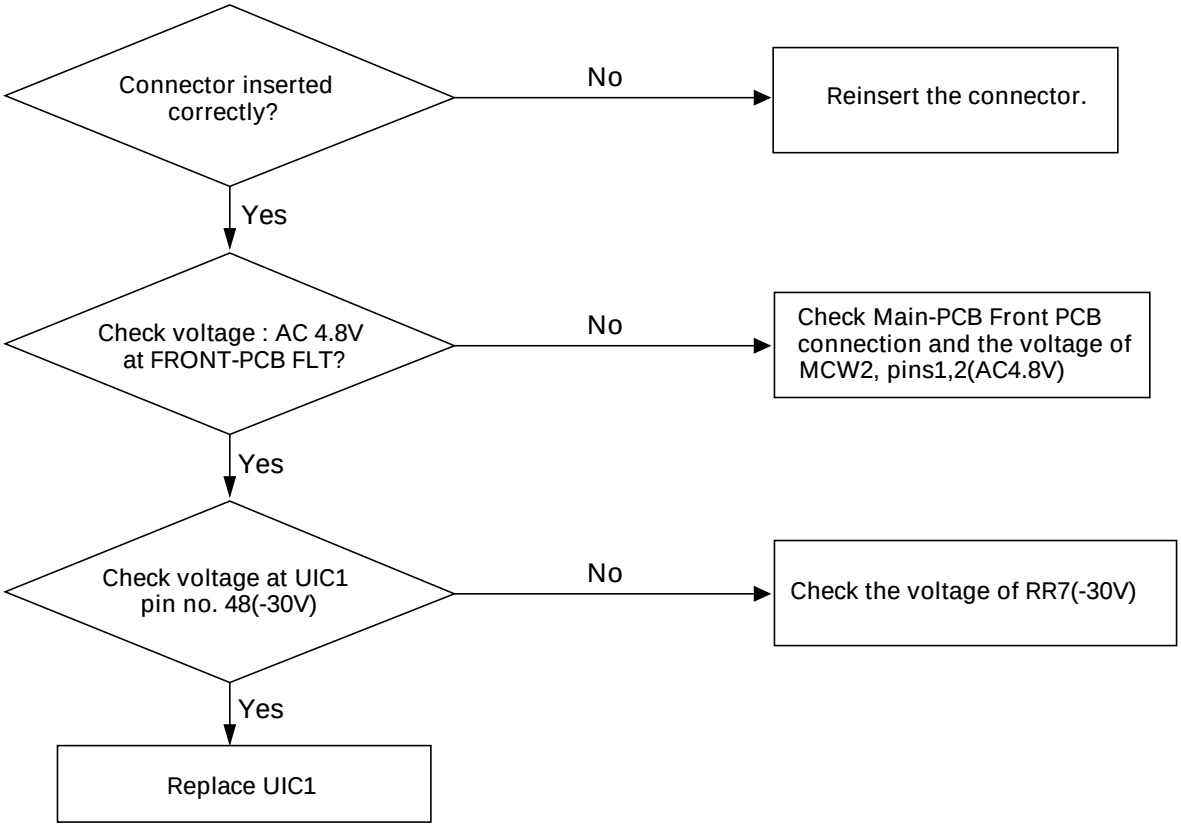
6-1-2 No Output



6-1-3 Tuner Malfunction(FM/AM)



6-1-4 V.F.D Malfunction

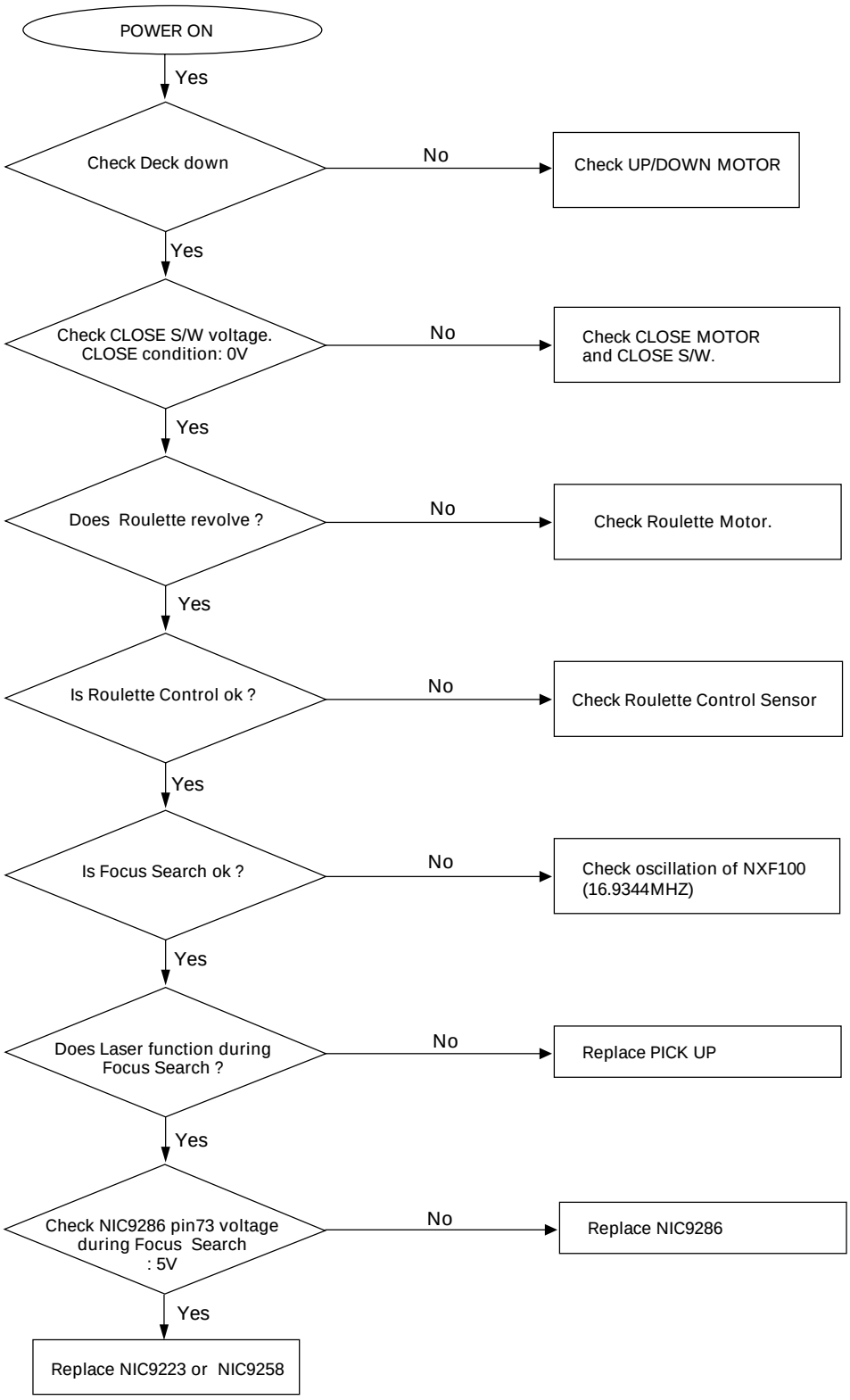


6-2 Cassette Deck

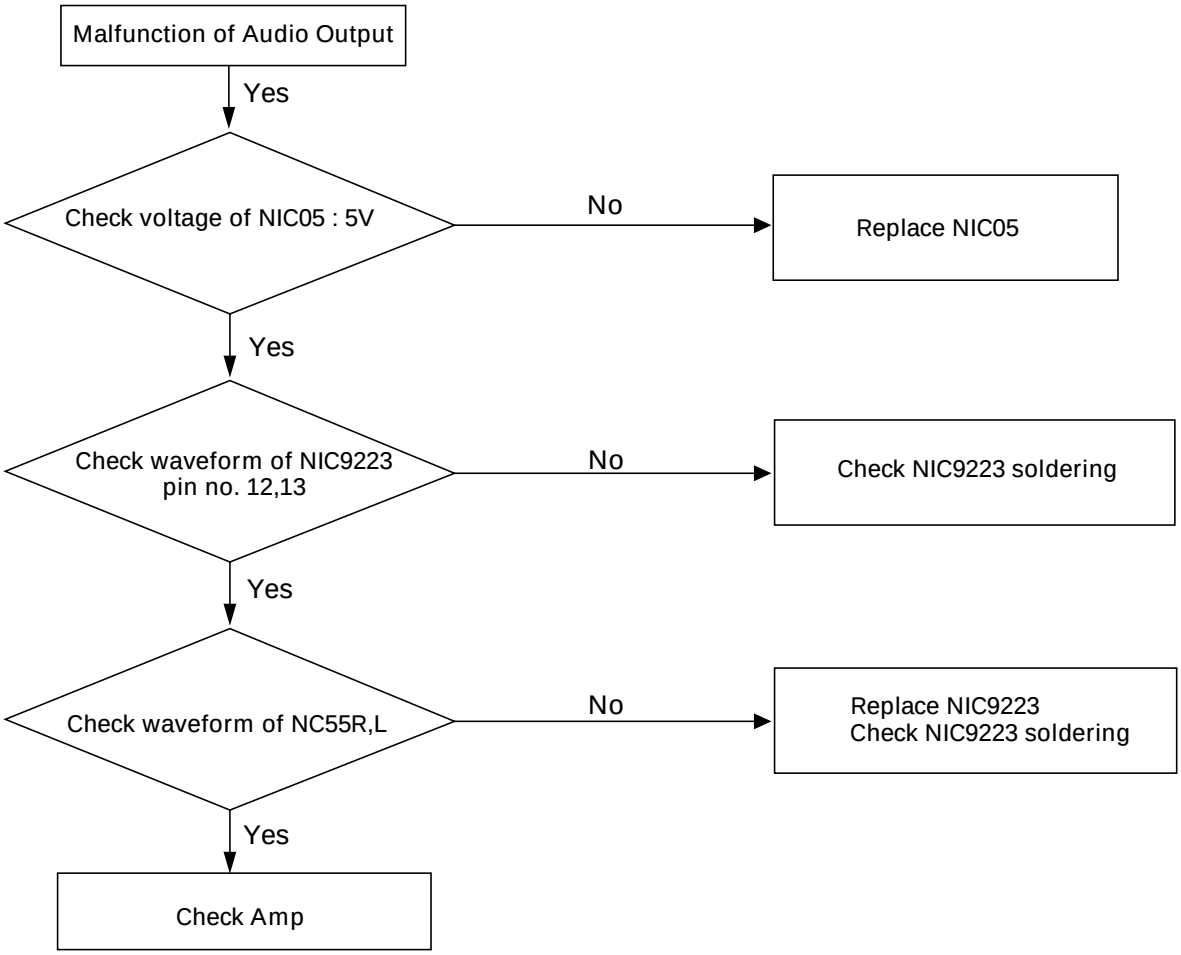
<table>
<tr><th>Block</th><th>Main Function</th><th>Check Point</th></tr>
<tr><td>TAPE IC JIC1
(KA22291)</td><td>Convert of P/B & R/P Signal</td><td>Check for voltage at pin5
1 P/B Deck : H
2 P/B DECK : L</td></tr>
<tr><td>BIAS OSC</td><td>Oscillate RECORD BIAS (85kHz)</td><td>Check for voltage at JL3
Osc Frequency : 85kHz
When inoperative : LQ3 check</td></tr>
<tr><td>R/P Switching</td><td>Convert of PLAY/RECORD</td><td>Check for voltage at pin no.16,8
<table><tr><th>Mode</th><th>pin no. 16,8</th></tr><tr><td>Rec.</td><td>12V</td></tr><tr><td>PLAY</td><td>9V</td></tr></table></td></tr>
</table>

6-3 CD

6-3-1 Revolution Malfunction

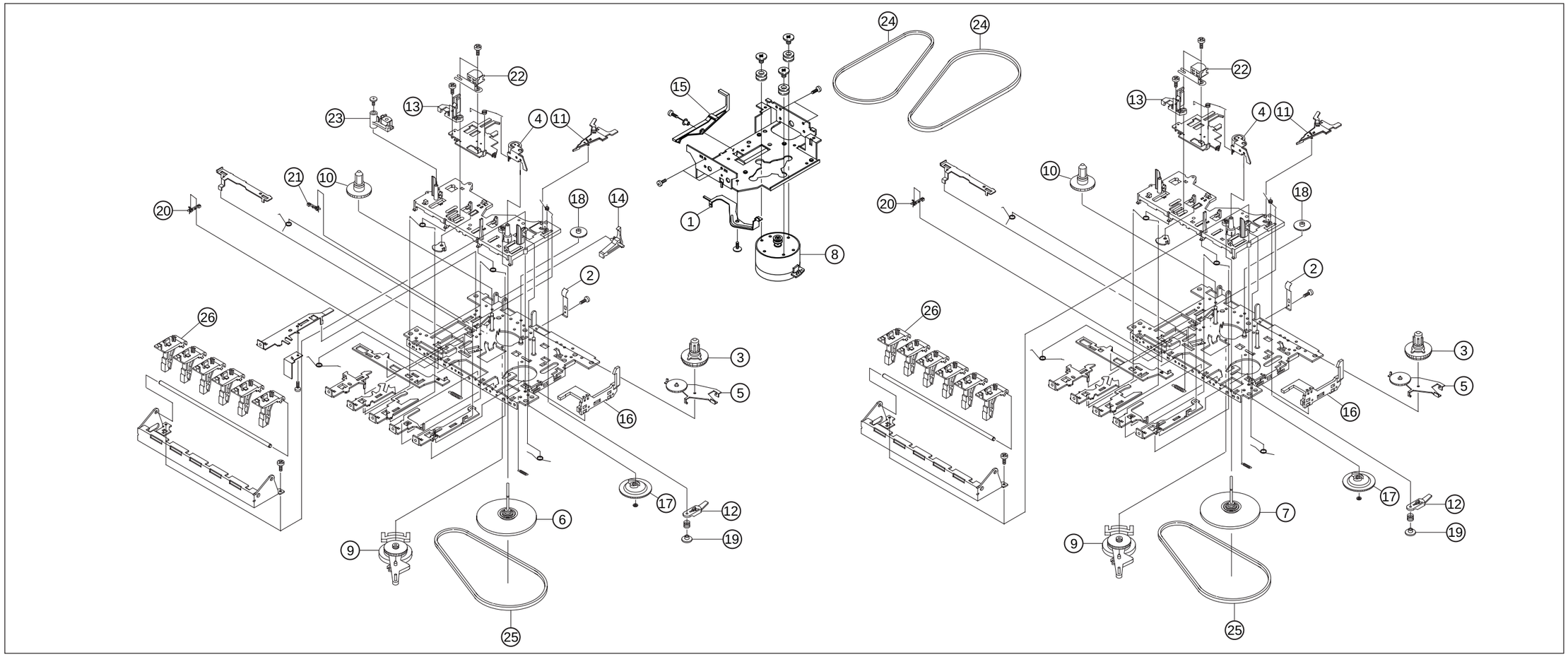


6-3-2 Audio Output Malfunction



7.Exploded Views and Parts List

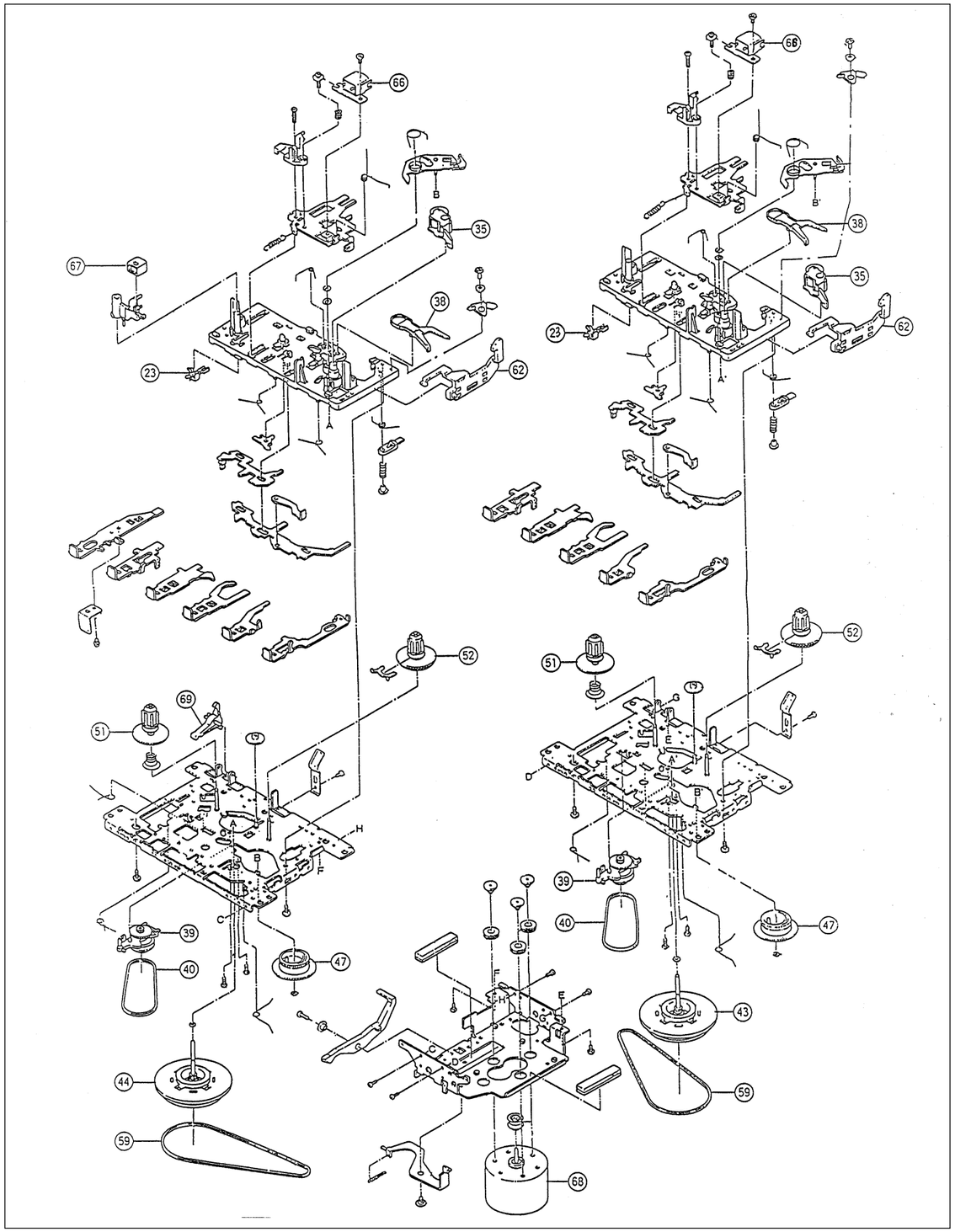
7-1 Cassette Deck Exploded View and Parts List



No.	Code No.	Description	Specification	Remarks
	AH59-20003A	DECK-CASSETTE	ADR2006FW	
1	AH81-10026X	LEVEL-SYNCHRO	11134-01280AA	
2	AH81-10026C	SPRING PACK	51299-02506XC	
3	AH81-10025B	TAKE UP REEL ASS'Y	ADR28-010	
4	AH81-10025D	PINCH ARM ASS'Y	ADR26-001	
5	AH81-10025E	IDLER ARM ASS'Y	ADR02-042	
6	AH81-10025F	FLYWHEEL GEAR S ASS'Y	ADR15-021	
7	AH81-10025G	FLYWHEEL GEAR D ASS'Y	ADR15-022	
8	AH81-10021T	MOTOR	EG530YD2B	
9	AH81-10025J	FR ARM ASS'Y	ADR22-012	
10	AH81-10025K	REEL GEAR ASS'Y	11128-00045AA	
11	AH81-10025T	ARM-SENSOR	11102-00530AA	
12	AH81-10025M	PAUSE LOCK ARM	11116-00011A	

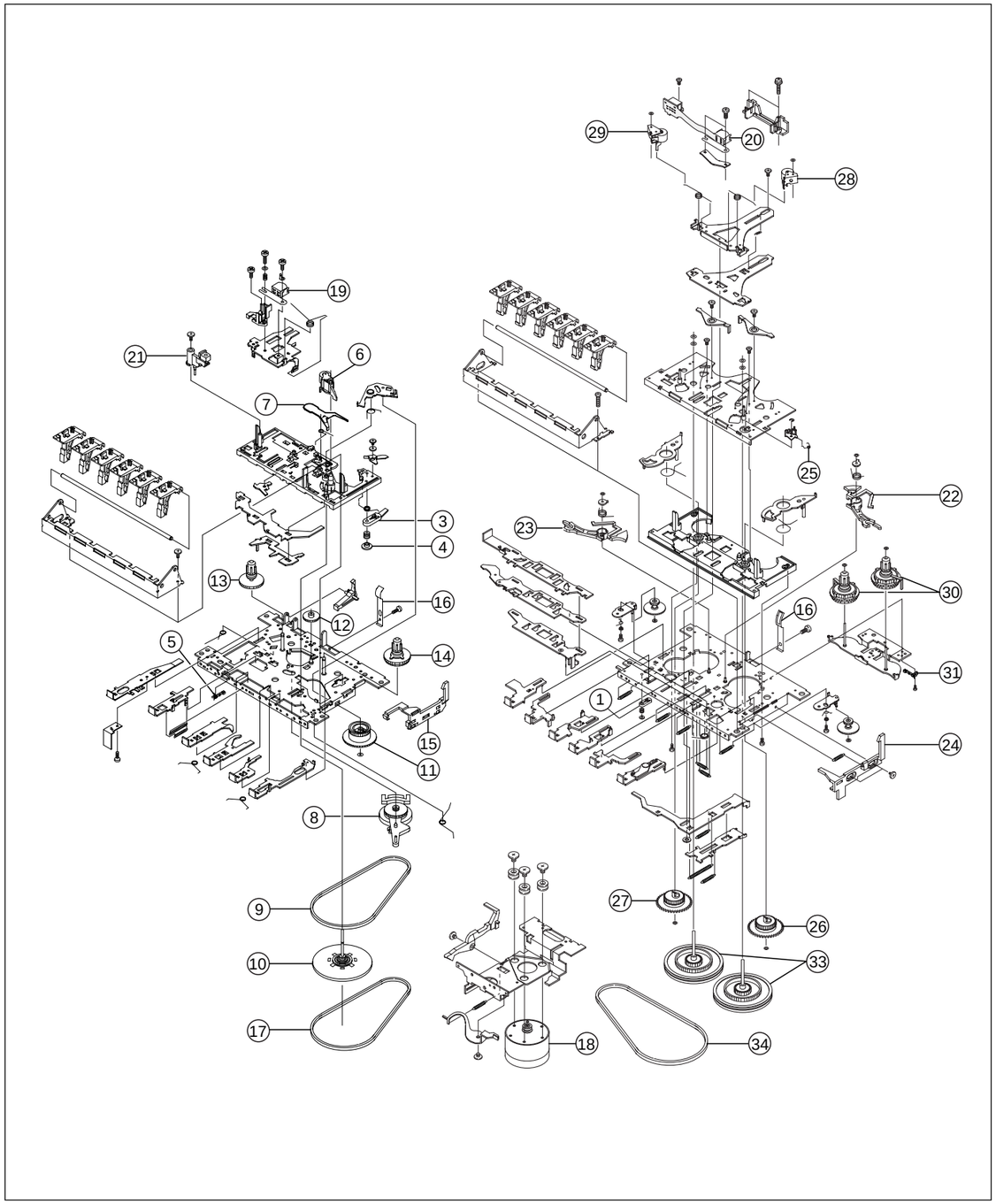
No.	Code No.	Description	Specification	Remarks
13	AH81-10025P	HEAD BASE M	11105-00031AA	
14	AH81-10026B	LEVER REC SAFETY	11134-01000AA	
15	AH81-10026W	LEVER RELEASE	11134-01240AA	
16	AH81-10026W	LEVER EJECT(F)	11134-01220AA	
17	AH81-10025Q	CAM GEAR	11128-00393AA	
18	AH81-10025R	F.F GEAR	11128-00055AA	
19	AH81-10025S	PAUSE CAP	11116-00011AA	
20	AH81-10025T	LEAF SW (MAIN)	MSW1541 X ACV	
21	AH81-10026U	LEAF SW (REC)	MSW 1716CV	
22	AH81-10022E	R/P HEAD	MS15R-AA2N1	
23	AH81-10026P	MGARM ASS'Y	11102-00520AA	
24	AH81-10026L	BELT MAIN	59.7 PI X 1.0T	
25	AH81-10026H	BELT SUB	34.7 PI X 1.0T	
26	AH81-10025U	BUTTON KNOB	11133-00010AA	

7-1 Cassette Deck View and Parts List



No.	Code No.	Description	Specification	Remarks
	AH59-20004Q	DECK-CASSETTE	YN21ZSW-70	
23	AH81-11037A	LEAF SWITCH	8521-200060-300	
35	AH81-11037B	PINCH ROLLER ASS'Y	6021-200213-001	
38	AH81-11037C	SENSOR LEVER	8521-200090-300	
39	AH81-11037D	R.F PULLEY ASS'Y	6600-090020-001	
40	AH81-11037E	BELT	8521-200110-001	
43	AH81-11037F	FLYWHEEL ASS'Y	8521-200110-300	
44	AH81-11037G	FLYWHEEL ASS'Y	8521-200030-300	
47	AH81-11037H	CAM GEAR	6021-200802-001	
51	AH81-11037J	S REEL ASS'Y	8521-200080-300	
52	AH81-11037K	T REEL ASS'Y	8521-200070-300	
59	AH81-11037L	BELT	6600-090013-000	
62	AH81-11037M	EJECT LEVER	6021-201304-001	
66	AH81-11037N	R/P HEAD	MS15RAA2N1	
67	AH81-11037P	ERASE HEAD	TDK6PA	
68	AH81-11037Q	MOTOR	EG530YD2BH	
69	AH81-11037R	REC SAFETY LEVER	6083-001202-004	

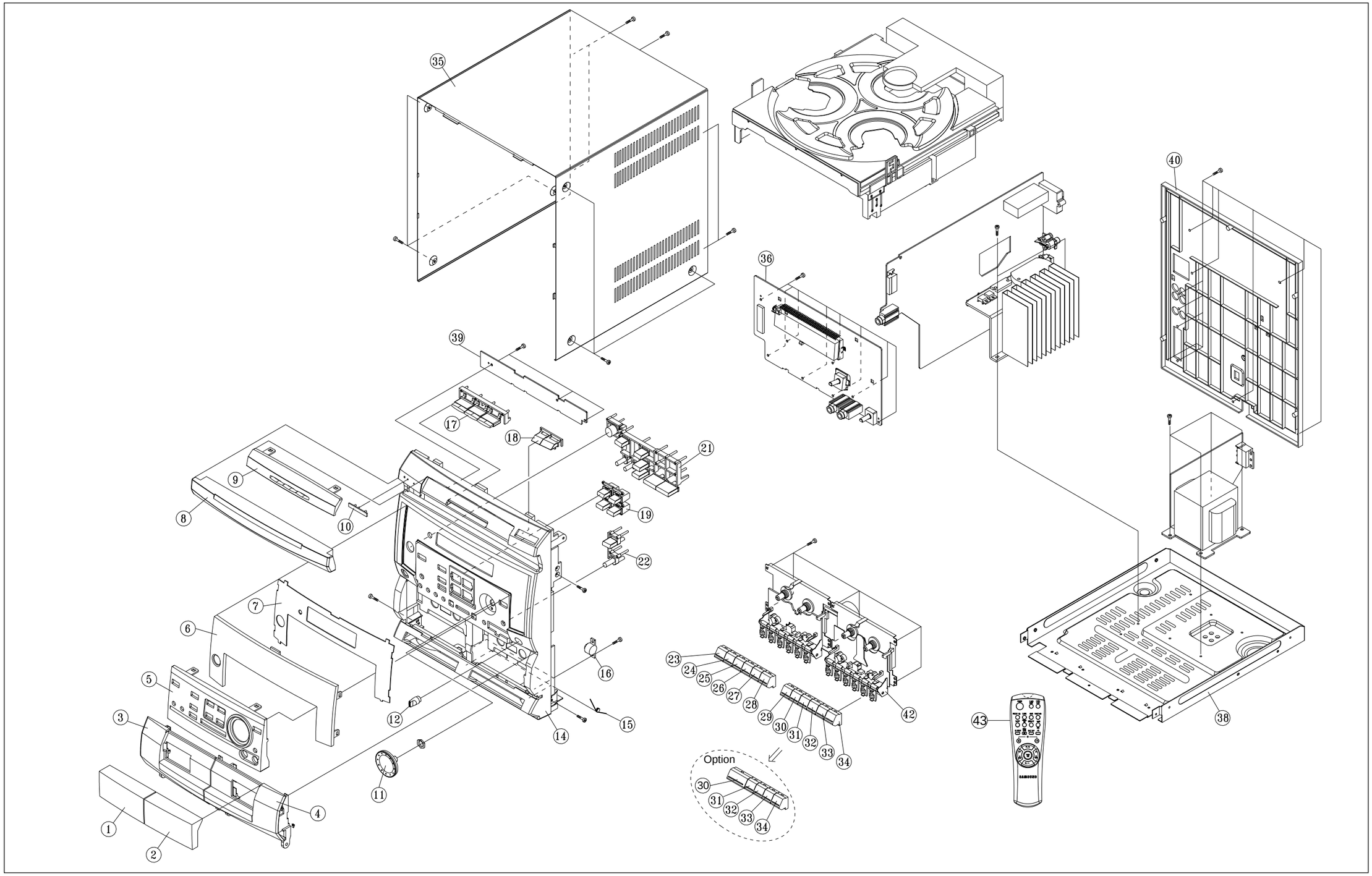
7-1 Cassette Deck View and Parts List (Option)



No.	Code No.	Description	Specification	Remarks
	AH59-20004E	TAPE DECK ASS'Y	YN921ZSW-41	
1	AH81-10001V	PAUSE LEVER	1821-01-15	
3	AH81-10005U	PAUSE LEVER	1821-14-55	
4	AH81-10005V	PAUSE STOPPER	1921-14-11	
5	AH81-10005W	LEAF SWITCH	MSW-1541T	
6	AH81-10005Z	PINCH ROLLER ARM ASS'Y	1921-04-301	
7	AH81-10006K	SENSOR	1921-05-06	
8	AH81-10006B	RF CLUCH ASS'Y	1921-07-302	
9	AH81-10006C	RF BLET	1921-07-03	
10	AH81-10006E	FLYWHEEL ASS'Y	1921-09-303	
11	AH81-10006F	CAM GEAR	1921-26-02	
12	AH81-10006G	FF GEAR	1821-10-07	
13	AH81-10006H	SUPPLY REEL ASS'Y	1921-05-304	
14	AH81-10006J	TAKE UP REEL ASS'Y	1921-05-303	
15	AH81-10006M	EJECT SLIDE LEVER	1921-13-02	
16	AH81-10006N	PACK SPRING	1821-10-93	
17	AH81-10006R	MAIN BELT	1821-12-173	
18	AH81-10021T	MOTOR	EG530YD2B	
19	AH81-10022E	R/P HEAD	MS15R-AA2N1	
20	AH81-10022H	P/B HEAD	MR359-KF243	
21	AH81-10022T	E-HEAD	PHK380-MS16A	
22	AH81-10023J	AUTO LEVER(F)	1851-20-01	
23	AH81-10023K	AUTO LEVER(R)	1851-20-02	
24	AH81-10023L	EJECT SLIDE LEVER	1851-17-03	
25	AH81-10023M	TURN OVER SPRING	1851-03-02	
26	AH81-10023N	GEAR-T CAM(F)	1851-05-03	
27	AH81-10023P	T-CAM GEAR(R)	1851-06-02	
28	AH81-10023Q	PINCH ROLLER(F)	1851-09-501	
29	AH81-10023R	PINCH ROLLER(R)	1851-10-501	
30	AH81-10023S	REEL ASS'Y	1851-11-501	
31	AH81-10023T	LEAF SW	MSW1290CV	
33	AH81-10023W	FLY WHEEL ASS'Y	1851-12-501	
34	AH81-10023W	MAIN BELT	1821-17-03	

7-2 Main Exploded View and Parts List

7-2-1 Exploded View



7-2-2 Parts List

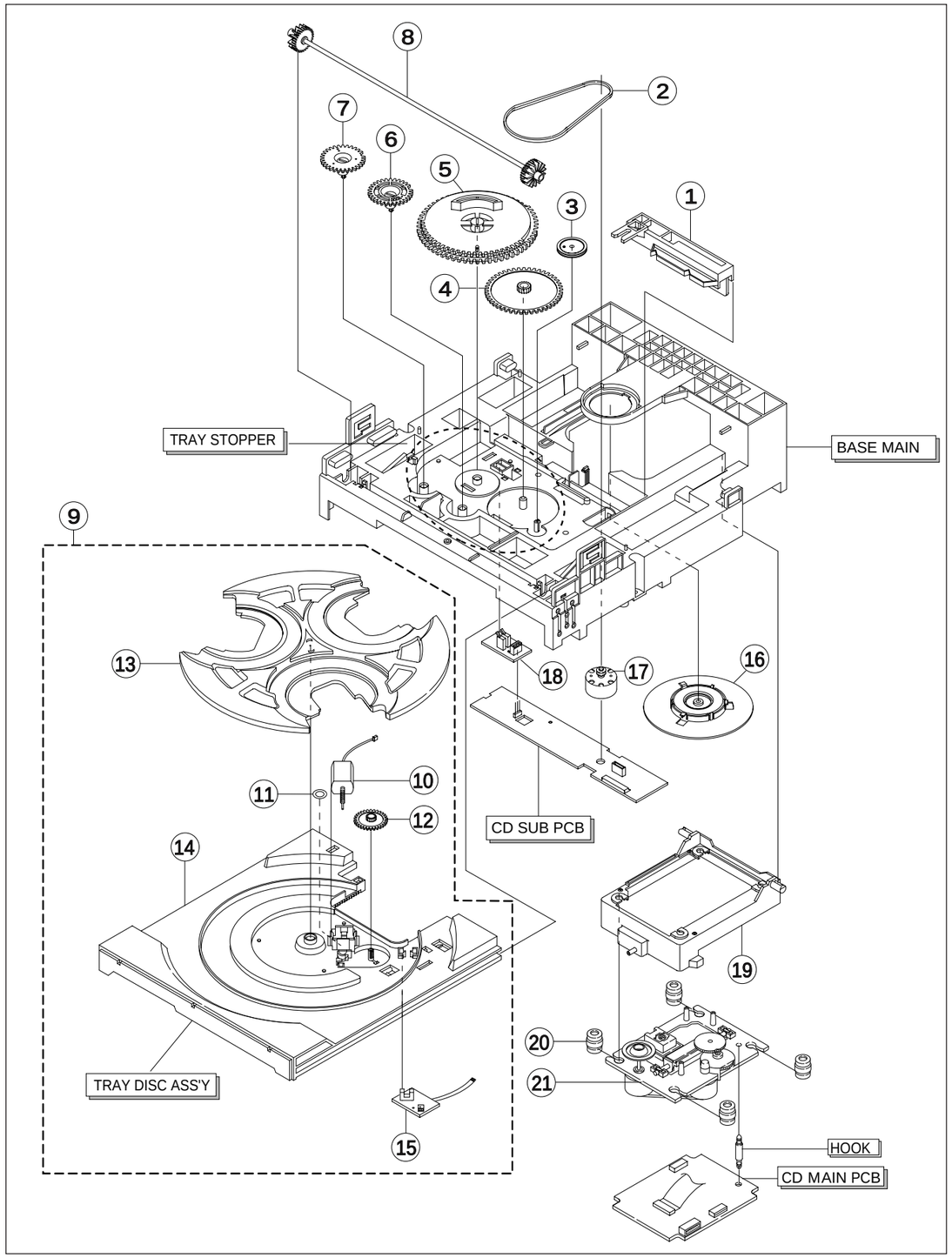
No.	Code No.	Description	Specification	Remarks
1	AH64-40443B	WINDOW-DOOR A	-,MAX810,PMMA,-,-,-,VIOLET	
2	AH64-40444B	WINDOW-DOOR B	-,MAX810,PMMA,-,-,-,VIOLET	
3	AH64-50341C	DOOR-CASS A	-,MAX810,ABS,94HB,BLK	TITAN
	AH64-50341B	DOOR-CASS A	-,MAX810,ABS,94HB,GRAY	SILVER
4	AH64-50342C	DOOR-CASS B	-,MAX810/STOP,ABS,94HB,BLK	TITAN
	AH64-50342E	DOOR-CASS B	MQ800/DOM (A/STOP)ABS,GRAY	SILVER
5	AH64-42003B	DECORATION-FRONT,E	-,MAX810/EXP,ABS,94HB,BLK	
6	AH64-40442C	WINDOW-VFD	-,MAX810,PMMA,-,-,-,VIOLET	
7	AH67-40030A	FILTER-VFD	-,PC 0.3T,-,-,-,BLK,MAX810	
8	AH64-50343C	DOOR-TRAY	-,MAX810,ABS,94HB,BLK	TITAN
	AH64-50343J	DOOR-TRAY	-,MAX810,ABS,94HB,SILVER	SILVER
9	AH64-40441B	WINDOW-CD	-,MAX810,PMMA,VIOLET	
10	AH64-70003B	BADGE-BRAND	AL,-,L30,-,-	
11	AH64-11237B	KNOB-VOLUME	-,ABS,94HB,BLK,-,MAX810	
12	AH64-11239B	KNOB-MIC VOL	-,MAX813V,ABS,DARK GRAY	TITAN
	AH64-11239C	KNOB-MIC VOL	-,MAX813V,ABS,GRAY	SILVER
13	AH69-20031A	CUSHION-FOOT	EVA,T2.0	
14	AH64-30419H	CABINET-FRONT	-,MAX810(N/MIC),MIPS,BLK TITAN	TITAN
	AH64-30419J	CABINET-FRONT	-,MAX810(N/MIC),MIPS,GRAY SILVER	SILVER
15	AH61-60129B	SPRING-EJECT	SUS,PI1.0,-,-	
16	AH61-80030A	DAMPER-ASSY	-,POM,M0.8,G130,BLK	
17	AH64-11233B	KNOB-DSC SEL	-,MAX810/EXP ABS,-,DARK GRAY	TITAN
	AH64-11233A	KNOB-DSC SEL	-,MQ810 ABS,-,MID GRAY	SILVER
18	AH64-11232C	KNOB-CD OPEN	-,ABS,94HB,-,GRAY,-,MQ810	TITAN
	AH64-11232B	KNOB-CD OPEN	-,ABS,94HB,-,DARK GRAY,-,MAX810	SILVER
19	AH64-11235B	KNOB-FUNCTION	-,ABS,94HB,WHT+PMMA,MAX810	
21	AH64-11234B	KNOB-POWER	-,ABS,94HB,-,GRAY,MAX810	
22	AH64-11236A	KNOB-MUTE	-,ABS,94HB,-,BLK,MAX810	
23	AH64-11244P	KNOB-CASS,RECORD	-,MAX810/EXP,ABS,-,DARK GRAY	TITAN
	AH64-11244J	KNOB-CASS,RECORD	-,MAX810/EXP,ABS,-,MID GRAY	SILVER
24	AH64-11243C	KNOB-CASS,REV PLAY	-,MAX810/EXP ABS,MID GRAY	TITAN
	AH64-11243B	KNOB-CASS,REV PLAY	-,MAX810/EXP ABS,GRAY	SILVER
25	AH64-11244N	KNOB-CASS,REWIND	-,MAX810/EXP,ABS,-,DARK GRAY	TITAN
	AH64-11244H	KNOB-CASS,REWIND	-,MAX810/EXP,ABS,-,MID GRAY	SILVER
26	AH64-11244M	KNOB-CASS,F.F	-,MAX810/EXP,ABS,-,DARK GRAY	TITAN
	AH64-11244G	KNOB-CASS,F.F	-,MAX810/EXP,ABS,-,MID GRAY	SILVER
27	AH64-11244L	KNOB-CASS,ST/EJ	-,MAX810/EXP,ABS,-,DARK GRAY	TITAN
	AH64-11244F	KNOB-CASS,ST/EJ	-,MAX810/EXP,ABS,-,MID GRAY	SILVER
28	AH64-11244K	KNOB-CASS,PAUSE	-,MAX810/EXP,ABS,-,DARK GRAY	TITAN
	AH64-11244E	KNOB-CASS,PAUSE	-,MAX810/EXP,ABS,-,MID GRAY	SILVER
30	AH64-11245B	KNOB-CASS,PLAY L	-,MAX810/EXP,ABS,-,DARK GRAY	TITAN
	AH64-11245C	KNOB-CASS,PLAY L	-,MQ800,ABS,-,L/GRAY	SILVER
31	AH64-11244N	KNOB-CASS,REWIND	MAX810/EXP,ABS,-,DARK GRAY	TITAN
	AH64-11244H	KNOB-CASS,REWIND	MAX810,-,-,L/GRAY	SILVER
32	AH64-11244M	KNOB-CASS,F.F	MAX810/EX,ABS,-,DARK GRAY	TITAN
	AH64-11244G	KNOB-CASS,F.F	MAX810/EXP,ABS,-,MID GRAY	SILVER

No.	Code No.	Description	Specification	Remarks
33	AH64-11244L	KNOB-CASS,ST/EJ	MAX810/EXP,ABS,DARK GRAY	TITAN
	AH64-11244F	KNOB-CASS,ST/EJ	MAX810/EXP,ABS,MID GRAY	SILVER
34	AH64-11244K	KNOB-CASS,PAUSE	MAX810/EXP,ABS,DARK GRAY	TITAN
	AH64-11244E	KNOB-CASS,PAUSE	MAX810/EXP,ABS,MID GRAY	SILVER
35	AH64-30390A	CABINET-TOP	PCM,-,T0.625	TITAN
	AH64-30390B	CABINET-TOP	PCM,-,T0.625, SILVER	SILVER
36	AH61-20488A	HOLDER-VFD	-,ABS,94HB,BLK,MAX810	
38	AH64-30416A	CABINET-BOTTOM	-,SECC,-,T1.0	
39	AH62-30126A	HEAT SINK-MAIN	-,AL,EXTRA,-,-,-,WHT	
40	AH64-30420C	CABINET-REAR	-,MAX810(EXP:VOL-M),MIPS,GRAY	TITAN
	AH64-30420B	CABINET-REAR	-,MAX810(S/VOL),MIPS,BLK	SILVER
41	AJ59-20150T	DECK-CDP	CMS-300	
42	AH59-20004Q	DECK-CASSETTE	YN21ZSW-70	
43	AH59-10124B	REMOCON-ASSY	-,-,BU2478-2Z,22,MAX810	
	AH63-30244D	COVER-HIDDEN	-,ABS,94HB,-,2,BLK,AR4022	
	AH59-90214A	SPEAKER-SYSTEM	PS810E,MAX810	

*In case of Auto Reverse Deck

No.	Code No.	Description	Specification	Remarks
29	AH64-11244S	KNOB-CASS MODE	-,MAX810/EXP,ABS,DARK GRAY	TITAN
	AH64-11244D	KNOB-CASS MODE	-,MAX810/EXP,ABS,MID GRAY	SILVER
30	AH64-11244R	KNOB-CASS REV PLAY	-,MAX810/EXP,ABS,DARK GRAY	TITAN
	AH64-11244C	KNOB-CASS REV PLAY	-,MAX810/EXP,ABS,MID GRAY	SILVER
34	AH64-11244Q	KNOB-CASS DIRECTION	-,MAX810/EXP,ABS,DARK GRAY	TITAN
	AH64-11244B	KNOB-CASS DIRECTION	-,MAX810/EXP,ABS,MID GRAY	SILVER
42	AH59-11244E	DECK-CASSETTE	YN921ZSW-41	

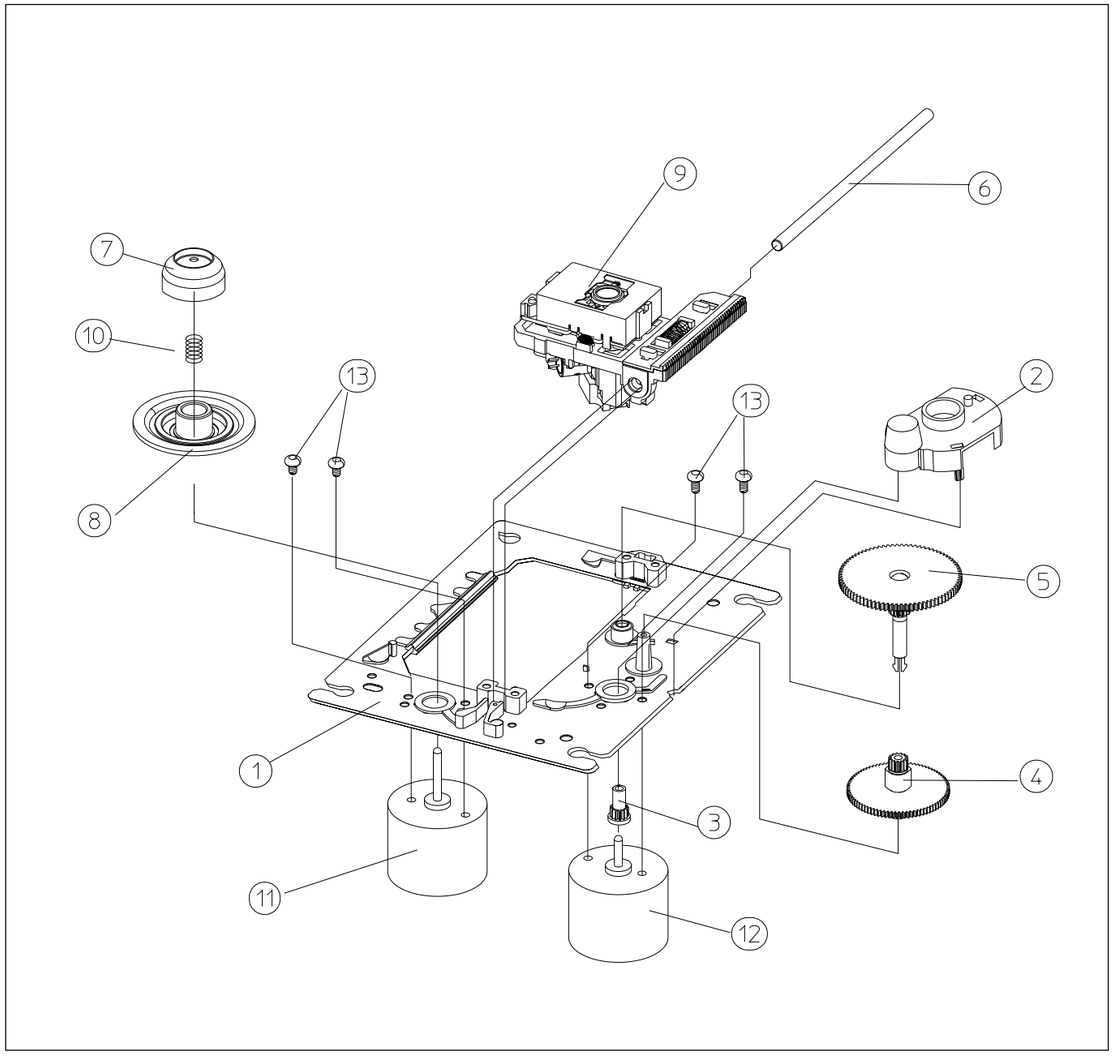
7-3 CD Mecha Exploded View and Parts List



No.	Code No.	Description	Specification	Remarks
1	AH66-80022A	SLIDER-CAM	ABS HF-380 NTR	
2	AH66-60034A	BELT-LOAD	CR	
3	AH66-20186A	GEAR-PULLEY	POM(M90-44) WHT	
4	AH66-20187A	GEAR-LOAD	POM(M90-44) BLK	
5	AH66-20188A	GEAR-CAM	POM(M90-44) WHT	
6	AH66-20189A	GEAR-TRAY	POM(M90-44) BLK	
7	AH66-20190A	GEAR-CONVERT	POM(M90-44) WHT	
8	AH66-20191A	GEAR-SYNCRO	ABS HF-380 NTR	
9	AH59-10097A	ASSY-TRAY DISC	CMS-300, ASS'Y-TRAY	
10	AH59-10098A	ASS-WORM-MOTOR	CMS-300, ASS'Y-WORM	
11	AH69-20044A	CUSHION-MOTOR	NBR BLK	
12	AH66-20193A	GEAR-ROULETTE	POM(M90-44) BLK	
13	AH66-90056A	TRAY-ROULETTE	ABS XR-401 BLK	
14	AH66-90055A	TRAY-DISC	-,ABS,-,BLK	
15	AH59-10099A	ASSY-PCB SENSOR	CMS-300,ASS'Y SENSOR	
16	AH59-10100A	ASSY-TABLE CHUCK	CMS-300,ASS'Y CHUCK	
17	AH59-10101A	ASSY-PULLEY-MOTOR	CMS-300,ASS'Y CHUCK	
19	AH66-30086A	LEVER-LIFTER	ABS HF-380 BLK	
20	AH73-10016A	RUBBER-CD	IRR	
21	AJ59-20003F	DECK-CDP	DECK-CD *CMS-A30NM6	

7-4 CD Deck Exploded View and Parts List

7-4-1 Exploded View



7-4-2 Parts List

No.	Code No.	Description	Specification	Remarks
	AJ59-20003F	DECK-CD	CMS-P30NM6	
1	AH61-10022C	CHASSIS-DECK(M)	CMSA30 POM M90-44	
2	AH63-30048A	COVER-GEAR	CMS-V30 BLK ABS	
3	AH66-20016A	GEAR(A)	CMS-V30 M0.3 Z13 SP POM	
4	AH66-20017A	GEAR(B)	CMS-V30 M0.3 Z13 SP POM	
5	AH66-20018A	GEAR(C)	CMS-V30 M0.3 Z16/Z90 SP POM	
6	AH71-50036A	SHAFT-PU	CMS-V30 D3 L79 SUS420J2	
7	15253-503-011	CENTER-RING	ABS+GS 20% CMS-V10N	
8	AH66-90018A	TURN-TABLE(M)	ABS+GS 20% CMS-V10N	
9	AJ30-20001B	PICK-UP CDP	P/U SOH-A1 ROW V-P/J	
10	AH61-60055A	SPRING-T/TABLE	CS STS-W PI0.4 D5.7 L9.3 CMS-V10N	
11	AH31-10009A	MOTOR-SPINDLE	RF-310T-11400 43L 25V 85mA	
12	AH31-10002B	MOTOR-FEED	RF-310ta 30MM NDM4RA3ETL 11.0MM	
13	AH60-10014A	SCREW-PH(+M2*3)	+M2X3 FE FZY W700	

8. Electrical Parts List

Location no.	Code no.	Description & Specifiation	Remarks
AH90-10737Y		**ASSY-FRONT PCB;MAX810,EXP**	
UC6	2409-000123	C-EDL;47000UF,4UA,5.5V,-,BK,-,5MM	
UCW1	3711-003674	CONNECTOR-HEADER;NOWALL,30P,1R,1.25MM,AN	
UCW2	3708-000454	CONNECTOR-FPC/FC/PIC;22P,1.25MM,STRAIGHT	
UCW3	AH39-20012W	LEAD-CONNECTOR ASS'Y;SC25,JC25,2P,150MM,	
UCW3-1	3711-000814	CONNECTOR-HEADER;BOX,2P,1R,2.5MM,ANGLE,S	
UIC1	AH09-10062T	IC-MCU;LC866232-XXXX,100P,QFP,MAX813V	
URE1	AH59-60001J	MODULE-REMOCON;GP1U271R,38KHZ,-,MESH,-,	
UVR1	3406-001023	SWITCH-ROTARY;5V,0.5MA,24DETENT/CLICK,12	
UX1	2801-001382	CRYSTAL-UNIT;12MHZ,50PPM,28-AAM,10PF,30O	
UX2	2801-001394	CRYSTAL-UNIT;32.768KHz,20ppm,28-AAY,12.5	
VFD1	AH07-20045R	VF-DISPLAY;SVA-12MS03,-,104.14X25,MAX810	
FLT	AH61-20488A	HOLDER-VFD;-,ABS,94HB,BLK,-,MAX810	
UC1	2401-001952	C-AL;4.7UF,20%,50V,-,TP,6.3X7,5	
UC10	2401-000244	C-AL;100UF,20%,10V,GP,TP,6.3X7,2.5M	
UC11	2202-000854	C-CERAMIC,MLC-AXIAL;47NF,30%,50V,Y5R,TP,	
UC12	2202-000854	C-CERAMIC,MLC-AXIAL;47NF,30%,50V,Y5R,TP,	
UC13	2201-000247	C-CERAMIC,DISC;15pF,5%,50V,CH,TP,5x3,5	
UC14	2201-000247	C-CERAMIC,DISC;15pF,5%,50V,CH,TP,5x3,5	
UC15	2401-001919	C-AL;2.2UF,20%,50V,-,TP,4X7MM,5	
UC16	2401-001931	C-AL;220NF,20%,50V,-,TP,4X7MM,5	
UC17	2401-001572	C-AL;47UF,20%,50V,GP,-,6.3X11,2.5MM	
UC18	2401-000484	C-AL;10UF,20%,50V,GP,-,5X5,2MM	
UC19	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
UC2	2202-000780	C-CERAMIC,MLC-AXIAL;100NF,+80-20%,50V,Y5	
UC20	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
UC21	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
UC22	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
UC22	2201-000846	C-CERAMIC,DISC;47NF,+80-20%,50V,Y5V,TP,8	
UC23	2401-000484	C-AL;10UF,20%,50V,GP,-,5X5,2MM	
UC24	2301-000407	C-FILM,PEF;2.7NF,10%,50V,TP,5.5X7X3MM,5M	
UC25	2401-001511	C-AL;47UF,20%,16V,GP,-,6X7,5	
UC26	2401-001952	C-AL;4.7UF,20%,50V,-,TP,6.3X7,5	
UC27	2401-001919	C-AL;2.2UF,20%,50V,-,TP,4X7MM,5	
UC28	2301-000407	C-FILM,PEF;2.7NF,10%,50V,TP,5.5X7X3MM,5M	
UC29	2401-001952	C-AL;4.7UF,20%,50V,-,TP,6.3X7,5	
UC3	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
UC4	2202-000780	C-CERAMIC,MLC-AXIAL;100NF,+80-20%,50V,Y5	
UC5	2401-000244	C-AL;100UF,20%,10V,GP,TP,6.3X7,2.5M	
UC58	2401-001511	C-AL;47UF,20%,16V,GP,-,6X7,5	
UC67	2401-000244	C-AL;100UF,20%,10V,GP,TP,6.3X7,2.5M	
UC68	2401-000244	C-AL;100UF,20%,10V,GP,TP,6.3X7,2.5M	
UC69	2401-000244	C-AL;100UF,20%,10V,GP,TP,6.3X7,2.5M	
UC7	2201-000423	C-CERAMIC,DISC;27PF,5%,50V,NPO,TP,5X3,2.	
UC70	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
UC71	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
UC72	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
UC73	2202-000854	C-CERAMIC,MLC-AXIAL;47NF,30%,50V,Y5R,TP,	
UC8	2201-000423	C-CERAMIC,DISC;27PF,5%,50V,NPO,TP,5X3,2.	
UC9	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
UD1	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UD11	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UD12	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UD13	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UD14	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
UD15	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UD18	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UD19	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UD20	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
UD21	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UD30	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
UIC2	1201-000163	IC-OP AMP;4560,SOP,8P,150MIL,DUAL,100V/M	
ULD1	0601-000141	LED;ROUND,GRN,3.1MM,555NM	
ULD2	0601-000141	LED;ROUND,GRN,3.1MM,555NM	
ULD3	0601-000141	LED;ROUND,GRN,3.1MM,555NM	
ULD4	0601-000141	LED;ROUND,GRN,3.1MM,555NM	
ULD5	0601-000141	LED;ROUND,GRN,3.1MM,555NM	
ULD6	0601-000141	LED;ROUND,GRN,3.1MM,555NM	
ULD7	0601-000141	LED;ROUND,GRN,3.1MM,555NM	
ULD8	0601-000141	LED;ROUND,GRN,3.1MM,555NM	
UQ1	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
UQ2	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
UQ5	0504-000122	TR-DIGITAL;KSR1009Y,NPN,300MW,4.7K,TO-92	
UQ6	0504-000122	TR-DIGITAL;KSR1009Y,NPN,300MW,4.7K,TO-92	
UQ7	0504-000122	TR-DIGITAL;KSR1009Y,NPN,300MW,4.7K,TO-92	
UQ8	0504-000122	TR-DIGITAL;KSR1009Y,NPN,300MW,4.7K,TO-92	
UR1	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR10	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR100	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR101	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR102	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR103	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR11	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR111	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR113	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR114	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR115	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR116	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR117	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR118	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR119	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR12	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR120	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR127	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR13	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR130	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR131	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR132	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR133	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR134	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR135	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR136	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR137	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR138	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR139	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR14	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR140	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR141	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR15	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR17	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR18	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Location no.	Code no.	Description & Specifiation	Remarks
UR19	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR2	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR20	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR21	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR22	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR23	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR24	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR25	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR26	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR27	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR28	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR29	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR3	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR31	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR32	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR33	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR34	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR35	2001-000508	R-CARBON;220KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR36	2001-000793	R-CARBON;47OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR38	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR40	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR41	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR42	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR48	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR49	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR5	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR50	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR51	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR52	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR53	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR54	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR55	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR56	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR57	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR58	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR59	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR6	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR60	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR61	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR62	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR63	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR64	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR65	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR7	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR73	3811-000389	WIRE-NO SHEATH CU;SPCW,300V,52.4MM,1/0.5	
UR74	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR8	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR80	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR86	2001-000869	R-CARBON;56OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR87	2001-000869	R-CARBON;56OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR88	2001-000869	R-CARBON;56OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR89	2001-000869	R-CARBON;56OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR9	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR95	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR96	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
UR97	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
UR99	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
USW1	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW10	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW11	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW12	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW13	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW14	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW15	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW16	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW17	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW18	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW19	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW2	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW20	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW3	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW4	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW5	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW6	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW7	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW8	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	
USW9	3404-000165	SWITCH-TACT;12V,50MA,160GF+-50GF,6X6MM,S	

AH90-10738A ASSY-MAIN PCB;MAX810,EXP,3BAND,FTZ S.N.A

AIC1	1201-000328	IC-POWER AMP;4141,SIP,18P,-,-,-,PLASTIC,	
AJ1	3716-000209	TERMINAL-BLOCK;,-,-,60V,7A	
AJ1-1	AH63-40009A	SHIELD-PLATE;TE-SBC,T0.3,-,SCM8100L/SEG,	
AJ2	3722-000363	JACK-PHONE;9P,6.4MM,AU,BLK,-	
AL2L	AH27-90001B	COIL-SPRING;,2.2UH,-,-,SPRING	
AL2R	AH27-90001B	COIL-SPRING;,2.2UH,-,-,SPRING	
AL3L	AH27-90001B	COIL-SPRING;,2.2UH,-,-,SPRING	
AL3R	AH27-90001B	COIL-SPRING;,2.2UH,-,-,SPRING	
BIC1	1204-001281	IC-AUDIO PROCESSOR;TDA7439,DIP,30P,400MI	
BJ1	3722-000377	JACK-RCA;4P/2C,3.5MM,SN,BLK,#16~22	
DECK	AH39-50001X	LEAD-FASTEN;RING,1007#24,200MM,BLK	
EIFT1	AH27-80060B	COIL-OSC;RBQ-07VB,393UH,MW/LW-RF	
FJ1	3716-000198	TERMINAL-BLOCK;NON SOLDER,3P,4MM,-,	
H/SINK	AH62-30126A	HEAT SINK-MAIN;-,AL EXTRA,-,-,-,WHT,-,MA	
HIC1	AH14-10007G	IC;LC72131,DIP,STICK PLL	
HX1	2801-000734	CRYSTAL-UNIT;7.2MHZ,50PPM,28-AAM,12PF,30	
IC	6003-000276	SCREW-TAPTITE;BH,+,B,M3,L10,ZPC(YEL),SWC	
ICF1	2903-000148	FILTER-CERAMIC;BP,450KHZ+-1KHZ,-,6DB,-,B	
ICF2	2802-000215	RESONATOR-CERAMIC;19KHZ,+-38HZ,-,7.0X3.5	
IFT1	AH26-10001E	TRANS-IF;KS940228-09,-,-,7.6X12.0,-,450K	
IFT2	AH26-10020A	TRANS-DET;-,7KLL,DET,-,7.8MM,91PF,11.32M	
IIC1	AH14-10007H	IC;LA1836,DIP,STICK IF+MPX	
IL1	AH26-10001A	TRANS-IF;FV-AD-BASE19K/38K,LOW PASS FILT	
IL2	AH26-10001A	TRANS-IF;FV-AD-BASE19K/38K,LOW PASS FILT	
IL3	AH27-10001K	COIL-CHOKE;10MH,K,Q10,-,-,CL-3,-,-,	
JCW1	3711-000733	CONNECTOR-HEADER;BOX,17P,1R,2.5MM,STRAIG	
JIC1	1201-000358	IC-PREAMP;22291,DIP,24P,-,DUAL,-,PLASTIC	
JL1L	AH26-10002Y	COIL-TRAP;FB875-85A,BIAS-TRAP,35DB,8.0,1	
JL1R	AH26-10002Y	COIL-TRAP;FB875-85A,BIAS-TRAP,35DB,8.0,1	
JL3	AH26-10001E	TRANS-IF;KS940228-09,-,-,7.6X12.0,-,450K	
MCW2	3710-001221	CONNECTOR-SOCKET;30P,1R,1.25MM,ANGLE,SN	
P/CORD	AH39-10002L	POWER CORD;CP2,KLCE-2F,2.15M,5239,VDE	
PL1	AH27-10001F	COIL-CHOKE;27UH,K,Q30,-,-,DR(6.5*7.5),-,	
PL2	AH27-10001F	COIL-CHOKE;27UH,K,Q30,-,-,DR(6.5*7.5),-,	
PSC1	2201-000520	C-CERAMIC,DISC;4.7NF,+80-20%,400VAC,Y5V,	
PSC2	2201-000520	C-CERAMIC,DISC;4.7NF,+80-20%,400VAC,Y5V,	
PSCW1	3722-000337	JACK-AC POWER;2P,-,NI,BLK,#16~22	
R1R-1	3711-000733	CONNECTOR-HEADER;BOX,17P,1R,2.5MM,STRAIG	
RC10	2401-000118	C-AL;1000UF,20%,10V,GP,TP,10X12.5,5	
RC15	2401-001067	C-AL;3300UF,20%,42V,GP,-,18X35.5,7.	

Location no.	Code no.	Description & Specifiation	Remarks
RC2	2201-000161	C-CERAMIC,DISC;10nF,+80-20%,500V,Y5V,TP,	
RC23	2401-001364	C-AL;470UF,20%,16V,GP,TP,10X12MM,5M	
RC3	2401-001067	C-AL;3300UF,20%,42V,GP,-,18X35.5,7.	
RC3	2401-001364	C-AL;470UF,20%,16V,GP,TP,10X12MM,5M	
RC4	2201-000161	C-CERAMIC,DISC;10nF,+80-20%,500V,Y5V,TP,	
RC5	2401-000871	C-AL;220UF,20%,50V,GP,-,10X16MM,5MM	
RC6	2401-001942	C-AL;3300UF,20%,35V,GP,BK,18X35.5MM	
RCON1	AH39-20514A	LEAD CONNECTOR-ASSY;-,5264,51088,10P,300	
RCW1	3711-000586	CONNECTOR-HEADER;BOX,10P,1R,2.5MM,ANGLE,	
RCW1-1	AH39-20514A	LEAD CONNECTOR-ASSY;-,5264,51088,10P,300	
RCW2	3711-001137	CONNECTOR-HEADER;BOX,8P,1R,2mm,STRAIGHT,	
RD2	0402-000450	DIODE-BRIDGE;PBL403,200V,4.0A,DIP-4	
RD7	0402-000157	DIODE-RECTIFIER;1N5402,200V,3A,DO-201AD	
RD8	0402-000157	DIODE-RECTIFIER;1N5402,200V,3A,DO-201AD	
RF1	3601-000207	FUSE-FERRULE;250V,1A,TIME LAG,GLASS,5X20	
RF3	3601-000248	FUSE-FERRULE;250V,2A,TIME LAG,GLASS,5X20	
RF4	3601-000248	FUSE-FERRULE;250V,2A,TIME LAG,GLASS,5X20	
RIC1	1203-000166	IC-POSI.ADJUST REG.;3950,SIP,12P,-,PLAST	
RQ3	0502-000424	TR-POWER;2SB1566-F,PNP,2W,TO-220FN,BK,1	
RR4	2003-000736	R-METAL OXIDE(S);560OHM,5%,3W,AA,TP,6X16	
T-PA	AH40-10001T	TUNER;FE415-G11,-,75OHM	

AH93-30002E ASSY-MAIN COM,AUTO;MAX810,EXP,3BAND,FTZ S.N.A

Location no.	Code no.	Description & Specifiation	Remarks
AC10	2401-001938	C-AL;22UF,20%,25V,GP,BK,5X11MM,2MM	
AC11	2401-000475	C-AL;10UF,20%,50V,GP,-,5X11,2MM	
AC14	2401-002168	C-AL;100UF,20%,50V,GP,TP,10X12.5,5M	
AC15	2401-000475	C-AL;10UF,20%,50V,GP,-,5X11,2MM	
AC16L	2201-000520	C-CERAMIC,DISC;4.7NF,+80-20%,400VAC,Y5V,	
AC16R	2201-000520	C-CERAMIC,DISC;4.7NF,+80-20%,400VAC,Y5V,	
AC17L	2201-000520	C-CERAMIC,DISC;4.7NF,+80-20%,400VAC,Y5V,	
AC17R	2201-000520	C-CERAMIC,DISC;4.7NF,+80-20%,400VAC,Y5V,	
AC18L	2201-000783	C-CERAMIC,DISC;100NF,+80%,-20%,50V,Y5V,T	
AC18R	2201-000783	C-CERAMIC,DISC;100NF,+80%,-20%,50V,Y5V,T	
AC1L	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
AC1R	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
AC20L	2301-000469	C-FILM,PEF;68NF,10%,50V,TP,9X12X4.5MM,5M	
AC20R	2301-000469	C-FILM,PEF;68NF,10%,50V,TP,9X12X4.5MM,5M	
AC2L	2202-000850	C-CERAMIC,MLC-AXIAL;2.2NF,30%,16V,Y5R,TP	
AC2R	2202-000850	C-CERAMIC,MLC-AXIAL;2.2NF,30%,16V,Y5R,TP	
AC4L	2401-001968	C-AL;470NF,20%,50V,GP,TP,5X11MM,5	
AC4R	2401-001968	C-AL;470NF,20%,50V,GP,TP,5X11MM,5	
AC5L	2401-001895	C-AL;100UF,20%,16V,GP,BK,6.3X11MM,2	
AC5R	2401-001895	C-AL;100UF,20%,16V,GP,BK,6.3X11MM,2	
AC6L	2401-001552	C-AL;47UF,20%,35V,GP,-,6.3X11,2.5MM	
AC6R	2401-001552	C-AL;47UF,20%,35V,GP,-,6.3X11,2.5MM	
AC7	2401-001895	C-AL;100UF,20%,16V,GP,BK,6.3X11MM,2	
AC7L	2401-001465	C-AL;47UF,20%,10V,GP,-,5X11,2MM	
AC8L	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3	
AC8R	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3	
AC9L	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3	
AC9R	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3	
AQ1L	0501-000407	TR-SMALL SIGNAL;KSD471A-Y,NPN,800MW,TO-9	
AQ1R	0501-000407	TR-SMALL SIGNAL;KSD471A-Y,NPN,800MW,TO-9	
AQ2	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
AQ3	0504-000121	TR-DIGITAL;KSR1007,NPN,300MW,22K-47K,TO-	
AR10L	2001-001146	R-CARBON(S);4.7OHM,5%,1/2W,AA,TP,2.4X6.4	
AR10R	2001-001146	R-CARBON(S);4.7OHM,5%,1/2W,AA,TP,2.4X6.4	
AR11	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR11L	2001-000109	R-CARBON(S);470OHM,5%,1/2W,AA,TP,2.4X6.4	
AR11R	2001-000109	R-CARBON(S);470OHM,5%,1/2W,AA,TP,2.4X6.4	
AR12	2001-001088	R-CARBON(S);1KOHM,5%,1/2W,AA,TP,2.4X6.4M	
AR16	2008-000121	R-FUSIBLE;100OHM,5%,1/4W,AA,TP,2.6X6.7MM	
AR17	2001-001088	R-CARBON(S);1KOHM,5%,1/2W,AA,TP,2.4X6.4M	
AR18	2001-001088	R-CARBON(S);1KOHM,5%,1/2W,AA,TP,2.4X6.4M	
AR19	2008-000121	R-FUSIBLE;100OHM,5%,1/4W,AA,TP,2.6X6.7MM	
AR1L	2001-000858	R-CARBON;56KOHM,1%,1/8W,AD,TP,1.8X3.2MM	
AR1R	2001-000858	R-CARBON;56KOHM,1%,1/8W,AD,TP,1.8X3.2MM	
AR20	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
AR2L	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR2R	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR3L	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR3R	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR4L	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
AR4R	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
AR5L	2001-000857	R-CARBON;560OHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR5R	2001-000857	R-CARBON;560OHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR6L	2001-000858	R-CARBON;56KOHM,1%,1/8W,AD,TP,1.8X3.2MM	
AR6R	2001-000858	R-CARBON;56KOHM,1%,1/8W,AD,TP,1.8X3.2MM	
AR7L	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.	
AR7R	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.	
AR8L	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.	
AR8R	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.	
AR9L	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
AR9R	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BC1	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
BC10L	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC10R	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC11L	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
BC11R	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
BC14L	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC14R	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC15L	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5P,TP,	
BC15R	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5P,TP,	
BC16L	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
BC16R	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
BC17L	2301-000375	C-FILM,PEF;100NF,5%,50V,TP,11X12.5X6.5,7	
BC17R	2301-000375	C-FILM,PEF;100NF,5%,50V,TP,11X12.5X6.5,7	
BC18L	2301-000375	C-FILM,PEF;100NF,5%,50V,TP,11X12.5X6.5,7	
BC18R	2301-000375	C-FILM,PEF;100NF,5%,50V,TP,11X12.5X6.5,7	
BC19L	2202-000820	C-CERAMIC,MLC-AXIAL;5.6NF,20%,16V,Y5R,TP	
BC19R	2202-000820	C-CERAMIC,MLC-AXIAL;5.6NF,20%,16V,Y5R,TP	
BC20	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
BC21	2401-001912	C-AL;1UF,20%,50V,GP,BK,5X11MM,2MM	
BC22	2401-000795	C-AL;220UF,20%,16V,GP,-,8X11.5,3.5M	
BC23	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
BC24	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
BC3	2401-001895	C-AL;100UF,20%,16V,GP,BK,6.3X11MM,2	
BC4L	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC4R	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC5L	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC5R	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC7	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
BC8	2401-000795	C-AL;220UF,20%,16V,GP,-,8X11.5,3.5M	
BC8L	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC8R	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BC9L	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	

Electrical Parts List

Location no.	Code no.	Description & Specifiation	Remarks
BC9R	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
BD1	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
BD2	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
BL3	2701-000179	INDUCTOR-AXIAL;33UH,10%,4.2X9.8MM	
BQ1L	0504-000122	TR-DIGITAL;KSR1009Y,NPN,300MW,4.7K,TO-92	
BQ1R	0504-000122	TR-DIGITAL;KSR1009Y,NPN,300MW,4.7K,TO-92	
BQ2	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
BR1	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
BR2	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
BR3L	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
BR3R	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
BR4L	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR4R	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR5L	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR5R	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR6L	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR6R	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR7	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
BR7L	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR7R	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR8L	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BR8R	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
BZD1	0403-000374	DIODE-ZENER;UZ9.1BSC,9.1V,8.89-9.29V,40	
EC1	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
EC10	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
EC11	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
EC4	2201-000223	C-CERAMIC,DISC;12PF,5%,50V,CH,TP,5X3,5.0	
EC5	2201-000506	C-CERAMIC,DISC;3PF,0.25PF,50V,NPO,4.0X3.	
ED1	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
ED2	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
ED3	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
ED4	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
EQ1	0501-000394	TR-SMALL SIGNAL;KSC900-L,NPN,250MW,TO-92	
EQ4	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
EQ5	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
EQ6	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
ER1	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
ER11	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
ER2	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
ER3	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
ER4	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
ER6	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
ER7	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
FC2	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
FC3	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
FC4	2201-000426	C-CERAMIC,DISC;27pF,5%,50V,SL,TP,5x3,5	
FC5	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5	
FC6	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
FD1	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
FD2	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
FQ1	0501-000392	TR-SMALL SIGNAL;KSC838-O,NPN,250MW,TO-92	
FQ2	0501-000392	TR-SMALL SIGNAL;KSC838-O,NPN,250MW,TO-92	
FR1	2001-000411	R-CARBON;18KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR10	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
FR11	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR2	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR4	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR5	2001-000857	R-CARBON;560OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR6	2001-000005	R-CARBON;390OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR7	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
FR8	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR9	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
HC1	2201-000247	C-CERAMIC,DISC;15pF,5%,50V,CH,TP,5x3,5	
HC10	2201-000300	C-CERAMIC,DISC;1NF,20%,50V,Y5T,TP,5X3,5	
HC11	2301-000410	C-FILM,PEF;220NF,10%,50V,-,-,-	
HC2	2201-000423	C-CERAMIC,DISC;27PF,5%,50V,NPO,TP,5X3,2.	
HC3	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
HC4	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
HC5	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
HC6	2401-000240	C-AL;100UF,20%,10V,GP,TP,6X11MM,5MM	
HC7	2401-001022	C-AL;3.3UF,20%,50V,GP,-,5X11,2MM	
HC8	2202-000796	C-CERAMIC,MLC-AXIAL;1NF,10%,50V,Y5P,TP,3	
HC9	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
HD3	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
HD4	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
HR1	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR10	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
HR11	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR12	2001-001077	R-CARBON(S);150OHM,5%,1/2W,AA,TP,2.4X6.4	
HR13	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
HR14	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
HR15	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR2	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR3	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR4	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR5	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR6	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR7	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
HR8	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
HR9	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
HZD1	0403-000394	DIODE-ZENER;UZP5.6B,5.2-6.0V,1W,DO-41,TP	
IC1	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
IC10	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
IC11	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
IC12	2401-001968	C-AL;470NF,20%,50V,GP,TP,5X11MM,5	
IC13	2401-001912	C-AL;1UF,20%,50V,GP,BK,5X11MM,2MM	
IC14	2401-001912	C-AL;1UF,20%,50V,GP,BK,5X11MM,2MM	
IC15	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
IC15L	2301-000385	C-FILM,PEF;12NF,10%,50V,TP,6.5X8.5X3.2MM	
IC15R	2301-000385	C-FILM,PEF;12NF,10%,50V,TP,6.5X8.5X3.2MM	
IC16	2401-000778	C-AL;220UF,20%,10V,GP,-,6.3X11,2.5M	
IC17	2202-000854	C-CERAMIC,MLC-AXIAL;47NF,30%,50V,Y5R,TP,	
IC18	2401-001912	C-AL;1UF,20%,50V,GP,BK,5X11MM,2MM	
IC19	2401-001912	C-AL;1UF,20%,50V,GP,BK,5X11MM,2MM	
IC2	2401-001968	C-AL;470NF,20%,50V,GP,TP,5X11MM,5	
IC20	2301-000430	C-FILM,PEF;33NF,10%,50V,TP,7.5X11X4MM,5M	
IC21	2301-000430	C-FILM,PEF;33NF,10%,50V,TP,7.5X11X4MM,5M	
IC22	2401-001912	C-AL;1UF,20%,50V,GP,BK,5X11MM,2MM	
IC23	2202-000829	C-CERAMIC,MLC-AXIAL;820PF,10%,50V,Y5P,TP	
IC24	2202-000806	C-CERAMIC,MLC-AXIAL;220PF,10%,50V,Y5P,TP	
IC25	2301-000442	C-FILM,PEF;4.7NF,10%,50V,TP,5.5X7X3MM,5M	
IC25	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5	
IC26	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5	
IC27	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
IC28	2401-000475	C-AL;10UF,20%,50V,GP,-,5X11,2MM	
IC29	2301-000442	C-FILM,PEF;4.7NF,10%,50V,TP,5.5X7X3MM,5M	
IC3	2401-000475	C-AL;10UF,20%,50V,GP,-,5X11,2MM	
IC4	2202-000854	C-CERAMIC,MLC-AXIAL;47NF,30%,50V,Y5R,TP,	

Location no.	Code no.	Description & Specifiation	Remarks
IC5	2201-000260	C-CERAMIC,DISC;180PF,10%,50V,SL,4*4,2.5,	
IC6	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
IC7	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
IC8	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
IC9	2202-000854	C-CERAMIC,MLC-AXIAL;47NF,30%,50V,Y5R,TP,	
ID1	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
ID2	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
IQ1	0501-000294	TR-SMALL SIGNAL;KSA708-Y,PNP,800MW,TO-92	
IR1	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
IR10	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
IR11	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR16	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR2	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR3	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR4	2001-000527	R-CARBON;22OHM,5%,1/8W,AA,TP,1.8X3.2MM	
IR5	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR7L	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR7R	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR8L	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR8R	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
IR9	2001-000117	R-CARBON(S);68OHM,5%,1/2W,AA,TP,2.4X6.4M	
IVR1	2103-000492	VR-SEMI;5KOHM,30%,1/10W,TOP	
IZD1	0403-000398	DIODE-ZENER;UZP8.2B,8.2V,7.7-8.7V,1W,DO	
JC10L	2202-000848	C-CERAMIC,MLC-AXIAL;1.5NF,30%,50V,Y5S,TP	
JC10R	2202-000848	C-CERAMIC,MLC-AXIAL;1.5NF,30%,50V,Y5S,TP	
JC11	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
JC12	2401-000240	C-AL;100UF,20%,10V,GP,TP,6X11MM,5MM	
JC13L	2301-000393	C-FILM,PEF;18NF,10%,50V,TP,6.5X12.5X3.5M	
JC13R	2301-000393	C-FILM,PEF;18NF,10%,50V,TP,6.5X12.5X3.5M	
JC14	2401-001102	C-AL;330UF,20%,16V,GP,TP,8X12,5	
JC15	2401-001538	C-AL;47UF,20%,25V,GP,-,6X11,2.5MM	
JC16	2401-001102	C-AL;330UF,20%,16V,GP,TP,8X12,5	
JC17	2401-000419	C-AL;10UF,20%,16V,GP,-,4X7,5	
JC18	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
JC19L	2401-001022	C-AL;3.3UF,20%,50V,GP,-,5X11,2MM	
JC19R	2401-001022	C-AL;3.3UF,20%,50V,GP,-,5X11,2MM	
JC1L	2401-001022	C-AL;3.3UF,20%,50V,GP,-,5X11,2MM	
JC1R	2401-001022	C-AL;3.3UF,20%,50V,GP,-,5X11,2MM	
JC20L	2301-000370	C-FILM,PEF;1.8NF,10%,50V,TP,5.5X7X2.8M,5	
JC20R	2301-000370	C-FILM,PEF;1.8NF,10%,50V,TP,5.5X7X2.8M,5	
JC21L	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
JC21R	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
JC22L	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
JC22R	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
JC23L	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5	
JC23R	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5	
JC24L	2401-001019	C-AL;3.3UF,20%,50V,GP,-,5X7,1.5MM	
JC24R	2401-001019	C-AL;3.3UF,20%,50V,GP,-,5X7,1.5MM	
JC25L	2301-000428	C-FILM,PEF;3.9NF,5%,50V,TP,5.5X12X3,3MM	
JC25R	2301-000428	C-FILM,PEF;3.9NF,5%,50V,TP,5.5X12X3,3MM	
JC26L	2301-000476	C-FILM,PEF;82NF,10%,50V,TP,10.5X12.5X6,7	
JC26R	2301-000476	C-FILM,PEF;82NF,10%,50V,TP,10.5X12.5X6,7	
JC27L	2401-001022	C-AL;3.3UF,20%,50V,GP,-,5X11,2MM	
JC27R	2401-001022	C-AL;3.3UF,20%,50V,GP,-,5X11,2MM	
JC28	2301-000400	C-FILM,PEF;1NF,10%,50V,TP,5X7X2.8MM,5MM	
JC29	2301-000379	C-FILM,PEF;10NF,10%,50V,TP,6X7X3.2MM,5MM	
JC2L	2301-000390	C-FILM,PEF;15NF,10%,50V,TP,6.5X9X3.5MM,5	
JC2R	2301-000390	C-FILM,PEF;15NF,10%,50V,TP,6.5X9X3.5MM,5	
JC30	2301-000379	C-FILM,PEF;10NF,10%,50V,TP,6X7X3.2MM,5MM	
JC31	2301-000379	C-FILM,PEF;10NF,10%,50V,TP,6X7X3.2MM,5MM	
JC31	2401-000240	C-AL;100UF,20%,10V,GP,TP,6X11MM,5MM	
JC32	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
JC33	2401-000303	C-AL;100UF,20%,25V,GP,TP,6.3X11,2.5	
JC35	2202-000780	C-CERAMIC,MLC-AXIAL;100NF,+80-20%,50V,Y5	
JC36	2401-001912	C-AL;1UF,20%,50V,GP,BK,5X11MM,2MM	
JC38	2202-000807	C-CERAMIC,MLC-AXIAL;22NF,+80-20%,25V,Y5V	
JC3L	2301-000475	C-FILM,PEF;8.2NF,5%,50V,TP,6.5X12X3.5,3.	
JC3R	2301-000475	C-FILM,PEF;8.2NF,5%,50V,TP,6.5X12X3.5,3.	
JC4L	2301-000393	C-FILM,PEF;18NF,10%,50V,TP,6.5X12.5X3.5M	
JC4R	2301-000393	C-FILM,PEF;18NF,10%,50V,TP,6.5X12.5X3.5M	
JC50	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
JC51	2201-000520	C-CERAMIC,DISC;4.7NF,+80-20%,400VAC,Y5V,	
JC5L	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5	
JC5R	2401-001975	C-AL;47UF,20%,16V,GP,TP,5X11MM,5	
JC6L	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
JC6R	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
JC7L	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
JC7R	2202-000781	C-CERAMIC,MLC-AXIAL;100PF,10%,50V,Y5P,TP	
JC8L	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
JC8R	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
JC9L	2202-000847	C-CERAMIC,MLC-AXIAL;1,8NF,30%,50V,Y5S,	
JC9R	2202-000847	C-CERAMIC,MLC-AXIAL;1,8NF,30%,50V,Y5S,	
JD1	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
JD2	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
JD3	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
JD4	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
JD5	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
JD6	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
JD7	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
JD8	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
JL2	2701-000298	INDUCTOR-AXIAL;470UH,10%,4.2X9.8MM	
JQ10	0501-000610	TR-SMALL SIGNAL;KSA928A-Y,PNP,1W,TO-92L,	
JQ11	0504-000121	TR-DIGITAL;KSR1007,NPN,300MW,22K-47K,TO-	
JQ12	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
JQ13	0504-000121	TR-DIGITAL;KSR1007,NPN,300MW,22K-47K,TO-	
JQ14	0501-000294	TR-SMALL SIGNAL;KSA708-Y,PNP,800MW,TO-92	
JQ15	0504-000121	TR-DIGITAL;KSR1007,NPN,300MW,22K-47K,TO-	
JQ16	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
JQ17	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
JQ18	0504-000121	TR-DIGITAL;KSR1007,NPN,300MW,22K-47K,TO-	
JQ1L	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
JQ1R	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
JQ2L	0504-000121	TR-DIGITAL;KSR1007,NPN,300MW,22K-47K,TO-	
JQ2R	0504-000121	TR-DIGITAL;KSR1007,NPN,300MW,22K-47K,TO-	
JQ3	0501-000394	TR-SMALL SIGNAL;KSC900-L,NPN,250MW,TO-92	
JQ4L	0501-000010	TR-SMALL SIGNAL;KSC1008-Y,NPN,80V,60V,70	
JQ4R	0501-000010	TR-SMALL SIGNAL;KSC1008-Y,NPN,80V,60V,70	
JQ5L	0501-000010	TR-SMALL SIGNAL;KSC1008-Y,NPN,80V,60V,70	
JQ5R	0501-000010	TR-SMALL SIGNAL;KSC1008-Y,NPN,80V,60V,70	
JQ6	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
JQ7	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
JQ8	0504-000121	TR-DIGITAL;KSR1007,NPN,300MW,22K-47K,TO-	
JQ9	0501-000294	TR-SMALL SIGNAL;KSA708-Y,PNP,800MW,TO-92	
JR10L	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR10R	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR11	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR12	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR13	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Location no.	Code no.	Description & Specifiation	Remarks
JR14L	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR14R	2001-000472	R-CARBON;2.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR15	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR16	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR17	2001-000773	R-CARBON;470KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR18	2001-000938	R-CARBON;68OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR19	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR1L	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR1R	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR20	2001-000708	R-CARBON;39OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR21L	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR21R	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR22L	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR22R	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR23L	2001-000938	R-CARBON;68OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR23R	2001-000938	R-CARBON;68OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR24L	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR24R	2001-000591	R-CARBON;3.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR26L	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR26R	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR27L	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR27R	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR28L	2001-001000	R-CARBON;82KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR28R	2001-001000	R-CARBON;82KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR2L	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR2R	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR30	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR31	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR32	2001-000527	R-CARBON;22OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR33	2001-000032	R-CARBON;180ohm,5%,1/4W,AA,TP,2.4x6.4mm	
JR34L	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR34R	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR35L	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR35R	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR36	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR37	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR38	2001-000689	R-CARBON;390KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR39	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR3L	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR3L	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR4	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR40	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR41	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR42	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.	
JR44	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR45	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR46	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR46	2001-001000	R-CARBON;82KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR47	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR48	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR49	2001-000802	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR4L	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR4R	2001-000890	R-CARBON;6.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR5L	2001-000508	R-CARBON;220KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR5R	2001-000508	R-CARBON;220KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR6L	2001-000527	R-CARBON;22OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR6R	2001-000527	R-CARBON;22OHM,5%,1/8W,AA,TP,1.8X3.2MM	
JR8L	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR8R	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR9L	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JR9R	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
JVR1	2103-000341	VR-SEMI;2KOHM,30%,1/10W,TOP	
JVR3	2103-000171	VR-SEMI;10KOHM,30%,1/10W,TOP	
JZD1	0403-000374	DIODE-ZENER;UZ9.1BSC,9.1V,8.89-9.29V,40	
MJW124	2701-000111	INDUCTOR-AXIAL;100UH,10%,2.5X3.4MM	
MJW273	2701-000111	INDUCTOR-AXIAL;100UH,10%,2.5X3.4MM	
RC1	2401-002180	C-AL;2.2UF,20%,50V,GP,TP,5X11,5MM	
RC11	2201-000783	C-CERAMIC,DISC;100NF,+80%,-20%,50V,Y5V,T	
RC12	2401-000303	C-AL;100UF,20%,25V,GP,TP,6.3X11,2.5	
RC13	2201-000783	C-CERAMIC,DISC;100NF,+80%,-20%,50V,Y5V,T	
RC14	2401-001895	C-AL;100UF,20%,16V,GP,BK,6.3X11MM,2	
RC4	2401-002168	C-AL;100UF,20%,50V,GP,TP,10X12.5,5M	
RC7	2401-000475	C-AL;10UF,20%,50V,GP,-,5X11,2MM	
RC8	2201-000565	C-CERAMIC,DISC;47nF,20%,50V,Y5V,12.5x4.0	
RC9	2401-001895	C-AL;100UF,20%,16V,GP,BK,6.3X11MM,2	
RD1	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
RD10	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
RD11	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
RD12	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
RD13	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
RD14	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
RD2	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
RD3	0401-000101	DIODE-SWITCHING;1N4148,100V,200MA,500MW,	
RD9	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
RD9	0402-000151	DIODE-RECTIFIER;1N5392,100V,1.5A,DO-15	
RF1	3602-000147	FUSE-CLIP;250V,7.5A,30MOHM	
RF1-1	3602-000147	FUSE-CLIP;250V,7.5A,30MOHM	
RF3	3602-000147	FUSE-CLIP;250V,7.5A,30MOHM	
RF3-1	3602-000147	FUSE-CLIP;250V,7.5A,30MOHM	
RF4	3602-000147	FUSE-CLIP;250V,7.5A,30MOHM	
RF4-1	3602-000147	FUSE-CLIP;250V,7.5A,30MOHM	
RQ1	0501-000331	TR-SMALL SIGNAL;KSC1009-Y,NPN,800mW,TO-9	
RQ2	0504-001003	TR-DIGITAL;KSR2003,PNP,300MW,22K-22K,TO-	
RQ4	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
RR1	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RR10	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RR11	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RR2	2001-000587	R-CARBON;3.3KOHM,5%,1/2W,AA,TP,3.3X9MM	
RR3	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RR5	2001-000066	R-CARBON(S);10KOHM,5%,1/2W,AA,TP,2.4X6.4	
RR6	2001-000435	R-CARBON;1MOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RR7	2001-000778	R-CARBON;470OHM,5%,1/4W,AE,TP,2.4X6.4MM	
RR8	2001-000587	R-CARBON;3.3KOHM,5%,1/2W,AA,TP,3.3X9MM	
RR9	2001-000060	R-CARBON;6.8Kohm,5%,1/4W,AA,TP,2.4x6.4m	
RZD1	0403-000377	DIODE-ZENER;UZP10B,10V,9.4-10.6V,1W,DO-4	
RZD2	0403-000396	DIODE-ZENER;UZP6.8B,6.8V,6.4-7.2V,1W,DO	
RZD3	0403-000389	DIODE-ZENER;UZP30B,30V,28-33V,1W,DO-41,	
RZD4	0403-000394	DIODE-ZENER;UZP5.6B,5.2-6.0V,1W,DO-41,TP	
VD1	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41	
AH90-10719E		**ASSY-PCB;G3A8-3VI/C,NEW**	
	3708-001131	CONNECTOR-FPC/FC/PIC;5P,1.25MM,STRAIGHT,	
	3711-003379	CONNECTOR-HEADER;NOWALL,3P,1R,2.5MM,STRA	
SCW1	3711-002579	CONNECTOR-HEADER;WALL,22P,1R,2.5MM,ANGLE	
SCW2	3708-000507	CONNECTOR-FPC/FC/PIC;12P,1.25MM,ANGLE,SN	
SCW3	AH39-20025T	LEAD-CONNECTOR,ASSY;-,51004-08,35023-08,	
SCW4	AH39-20025S	LEAD-CONNECTOR,ASSY;-,51004-08,35023-08,	

Location no.	Code no.	Description & Specifiation	Remarks
AH94-30025M		**ASSY-PCB,AUTO;G3A8-3VI/C,NEW**	
SC1	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5P,TP,	
SC11	2401-000240	C-AL;100UF,20%,10V,GP,TP,6X11MM,5MM	
SC2	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5P,TP,	
SC3	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5P,TP,	
SC4	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5P,TP,	
SC5	2201-000163	C-CERAMIC,DISC;10nF,+80-20%,50V,Y5V,TP,6	
SC6	2201-000163	C-CERAMIC,DISC;10nF,+80-20%,50V,Y5V,TP,6	
SC7	2201-000163	C-CERAMIC,DISC;10nF,+80-20%,50V,Y5V,TP,6	
SC8	2401-000795	C-AL;220UF,20%,16V,GP,-,8X11.5,3.5M	
SC9	2401-000795	C-AL;220UF,20%,16V,GP,-,8X11.5,3.5M	
SIC1	1003-000298	IC-MOTOR DRIVER;LB1641,SIP,10P,-,-,-,ST,	
SIC2	1003-000298	IC-MOTOR DRIVER;LB1641,SIP,10P,-,-,-,ST,	
SIC3	AC14-12001G	IC;KA78L05,T,-	
SL1	2701-000179	INDUCTOR-AXIAL;33UH,10%,4.2X9.8MM	
SR1	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
SR2	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
SR3	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
SR4	2001-000028	R-CARBON(S);100OHM,5%,1/2W,AA,TP,2.4X6.4	
SR5	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
SZD1	0403-000352	DIODE-ZENER;UZ4.7BM,4.7V,4.4-5.0V,500MW,	
SZD2	0403-000361	DIODE-ZENER;UZ6.2BSB,6.2V,5.99-6.24V,50	
AH90-10737E		**ASSY-CD MAIN PCB;G3X8,NON ADJUST**	
	3409-000174	SWITCH-LEAF;16VDC,500MA,10GF,SPST	
	3708-000177	CONNECTOR-FPC/FC/PIC;16P,1MM,ANGLE,SN	
	3708-000412	CONNECTOR-FPC/FC/PIC;12P,1.25MM,ANGLE,	
	3711-001136	CONNECTOR-HEADER;BOX,8P,1R,2MM,ANGLE,SN	
	3809-000202	CABLE-FLAT;30V,80C,82MM,16P,1MM,UL2896	
	AH62-30047A	HEAT SINK;ETHD,-,T0.5,-,-,-,MAX-555,-	
NXF100	2802-000211	RESONATOR-CERAMIC;16.93MHZ,0.5%,TP,10.0X	
AH93-20001P		**ASSY-CD MAIN,CHIP;G3X8,NON ADJUST**	
IC9223	1204-001286	IC-ASP;KB9223,QFP,80P,-,PLASTIC,6V,20	
IC9258	1003-000179	IC-MOTOR DRIVER;KA9258D,SOP,28P,-,SINGLE	
IC9286	0904-001159	IC-DSP;9286,8BIT,QFP,80P,-,1MHZ,TR,CM	
NC100	2203-000892	C-CERAMIC,CHIP;4.7NF,10%,50V,X7R,TP,2012	
NC101	2203-000802	C-CERAMIC,CHIP;33nF,10%,50V,X7R,TP,2012,	
NC102	2203-001551	C-CERAMIC,CHIP;1.5NF,10%,50V,X7R,TP,2012	
NC103	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC104	2203-001537	C-CERAMIC,CHIP;1NF,10%,50V,X7R,TP,2012,-	
NC106	2203-000892	C-CERAMIC,CHIP;4.7NF,10%,50V,X7R,TP,2012	
NC107	2203-000199	C-CERAMIC,CHIP;100NF,+80-20%,50V,Z5U,TP,	
NC108	2203-000199	C-CERAMIC,CHIP;100NF,+80-20%,50V,Z5U,TP,	
NC110	2203-000495	C-CERAMIC,CHIP;2.2nF,10%,50V,X7R,TP,2012	
NC111	2203-000802	C-CERAMIC,CHIP;33nF,10%,50V,X7R,TP,2012,	
NC112	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC113	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC115	2203-001137	C-CERAMIC,CHIP;68NF,+80-20%,50V,Y5V,TP,2	
NC116	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC118	2203-000787	C-CERAMIC,CHIP;330PF,5%,50V,NPO,TP,2012,	
NC119	2203-000199	C-CERAMIC,CHIP;100NF,+80-20%,50V,Z5U,TP,	
NC120	2203-000199	C-CERAMIC,CHIP;100NF,+80-20%,50V,Z5U,TP,	
NC121	2203-000199	C-CERAMIC,CHIP;100NF,+80-20%,50V,Z5U,TP,	
NC124	2203-000919	C-CERAMIC,CHIP;470nF,+80-20%,16V,Y5V,TP,	
NC125	2203-000802	C-CERAMIC,CHIP;33nF,10%,50V,X7R,TP,2012,	
NC190	2203-001256	C-CERAMIC,CHIP;8PF,0.25PF,50V,NPO,TP,201	
NC200	2203-000979	C-CERAMIC,CHIP;47nF,10%,50V,X7R,TP,2012,	
NC2000	2203-001026	C-CERAMIC,CHIP;4PF,0.25PF,50V,SL,TP,2012	
NC201	2203-001551	C-CERAMIC,CHIP;1.5NF,10%,50V,X7R,TP,2012	
NC202	2203-001619	C-CERAMIC,CHIP;27PF,5%,50V,NPO,TP,2012,2	
NC203	2203-001619	C-CERAMIC,CHIP;27PF,5%,50V,NPO,TP,2012,2	
NC204	2203-000919	C-CERAMIC,CHIP;470nF,+80-20%,16V,Y5V,TP,	
NC205	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC300	2203-001537	C-CERAMIC,CHIP;1NF,10%,50V,X7R,TP,2012,-	
NC301	2203-000477	C-CERAMIC,CHIP;1UF,+80-20%,16V,Y5V,TP,20	
NC400	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC500	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC502	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC50L	2404-000367	C-TA,CHIP;4.7UF,20%,6.3V,-,TP,3216,-	
NC50R	2404-000367	C-TA,CHIP;4.7UF,20%,6.3V,-,TP,3216,-	
NC52L	2203-001537	C-CERAMIC,CHIP;1NF,10%,50V,X7R,TP,2012,-	
NC52R	2203-001537	C-CERAMIC,CHIP;1NF,10%,50V,X7R,TP,2012,-	
NC53L	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC53R	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC54L	2203-000239	C-CERAMIC,CHIP;100pF,5%,50V,NPO,TP,2012,	
NC54R	2203-000239	C-CERAMIC,CHIP;100pF,5%,50V,NPO,TP,2012,	
NC602	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC603	2203-001537	C-CERAMIC,CHIP;1NF,10%,50V,X7R,TP,2012,-	
NC800	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC804	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC901	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC902	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
NC903	2203-001537	C-CERAMIC,CHIP;1NF,10%,50V,X7R,TP,2012,-	
NC904	2203-000199	C-CERAMIC,CHIP;100NF,+80-20%,50V,Z5U,TP,	
NC905	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012,	
ND200	0407-000101	DIODE-ARRAY;DA204K,20V,100MA,C2-3,SOT-23	
ND201	0407-000101	DIODE-ARRAY;DA204K,20V,100MA,C2-3,SOT-23	
NJR102	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR103	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR104	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR105	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR105	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR106	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR107	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR108	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR110	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR111	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR112	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR113	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR114	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR115	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR116	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR117	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR118	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR127	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR129	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR131	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR132	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR133	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR134	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR135	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR136	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR137	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR138	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR139	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR140	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	

Location no.	Code no.	Description & Specifiation	Remarks
NJR141	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR142	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR143	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR144	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR145	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR146	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR147	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR148	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR149	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR150	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR151	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR152	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR153	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR154	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR155	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR156	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR300	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR301	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR302	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR303	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR304	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR305	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NJR306	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR307	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJR308	2007-000033	R-CHIP;0ohm,5%,1/8W,DA,TP,3216	
NJW320	2007-000029	R-CHIP;0ohm,5%,1/10W,DA,TP,2012	
NL100	2703-000001	INDUCTOR-SMD;10uH,10%,2.5x3.2x2mm	
NL300	3301-000325	CORE-FERRITE BEAD;AB,3.2X2.5X1.3MM,-,-	
NL301	2703-000001	INDUCTOR-SMD;10uH,10%,2.5x3.2x2mm	
NL302	3301-000325	CORE-FERRITE BEAD;AB,3.2X2.5X1.3MM,-,-	
NL303	2703-000001	INDUCTOR-SMD;10uH,10%,2.5x3.2x2mm	
NQ1502	0501-000314	TR-SMALL SIGNAL;KSA812,PNP,150MW,SOT-23,	
NR100	2007-000355	R-CHIP;12Kohm,5%,1/10W,DA,TP,2012	
NR101	2007-000593	R-CHIP;22ohm,5%,1/10W,DA,TP,2012	
NR102	2007-000468	R-CHIP;1Kohm,5%,1/10W,DA,TP,2012	
NR103	2007-000395	R-CHIP;150Kohm,5%,1/10W,DA,TP,2012	
NR104	2007-000338	R-CHIP;120KOHM,5%,1/10W,DA,TP,2012	
NR105	2007-000830	R-CHIP;39Kohm,5%,1/10W,DA,TP,2012	
NR106	2007-000338	R-CHIP;120KOHM,5%,1/10W,DA,TP,2012	
NR107	2007-000338	R-CHIP;120KOHM,5%,1/10W,DA,TP,2012	
NR108	2007-000941	R-CHIP;47Kohm,5%,1/10W,DA,TP,2012	
NR109	2007-000282	R-CHIP;100Kohm,5%,1/10W,DA,TP,2012	
NR111	2007-000941	R-CHIP;47Kohm,5%,1/10W,DA,TP,2012	
NR112	2007-001039	R-CHIP;56Kohm,5%,1/10W,DA,TP,2012	
NR113	2007-001177	R-CHIP;8.2Kohm,5%,1/10W,DA,TP,2012	
NR114	2007-000477	R-CHIP;1Mohm,5%,1/10W,DA,TP,2012	
NR115	2007-000444	R-CHIP;180KOHM,5%,1/10W,DA,TP,2012	
NR116	2007-001195	R-CHIP;820KOHM,5%,1/10W,DA,TP,2012	
NR117	2007-000898	R-CHIP;430KOHM,5%,1/10W,DA,TP,2012	
NR118	2007-001213	R-CHIP;82OHM,1%,1/10W,DA,TP,2012	
NR119	2007-000395	R-CHIP;150Kohm,5%,1/10W,DA,TP,2012	
NR120	2007-000355	R-CHIP;12Kohm,5%,1/10W,DA,TP,2012	
NR121	2007-000355	R-CHIP;12Kohm,5%,1/10W,DA,TP,2012	
NR200	2007-000653	R-CHIP;27Kohm,5%,1/10W,DA,TP,2012	
NR201	2007-000686	R-CHIP;3.3Kohm,5%,1/10W,DA,TP,2012	
NR202	2007-000686	R-CHIP;3.3Kohm,5%,1/10W,DA,TP,2012	
NR203	2007-000282	R-CHIP;100Kohm,5%,1/10W,DA,TP,2012	
NR204	2007-000355	R-CHIP;12Kohm,5%,1/10W,DA,TP,2012	
NR300	2007-000282	R-CHIP;100Kohm,5%,1/10W,DA,TP,2012	
NR400	2007-000409	R-CHIP;15Kohm,5%,1/10W,DA,TP,2012	

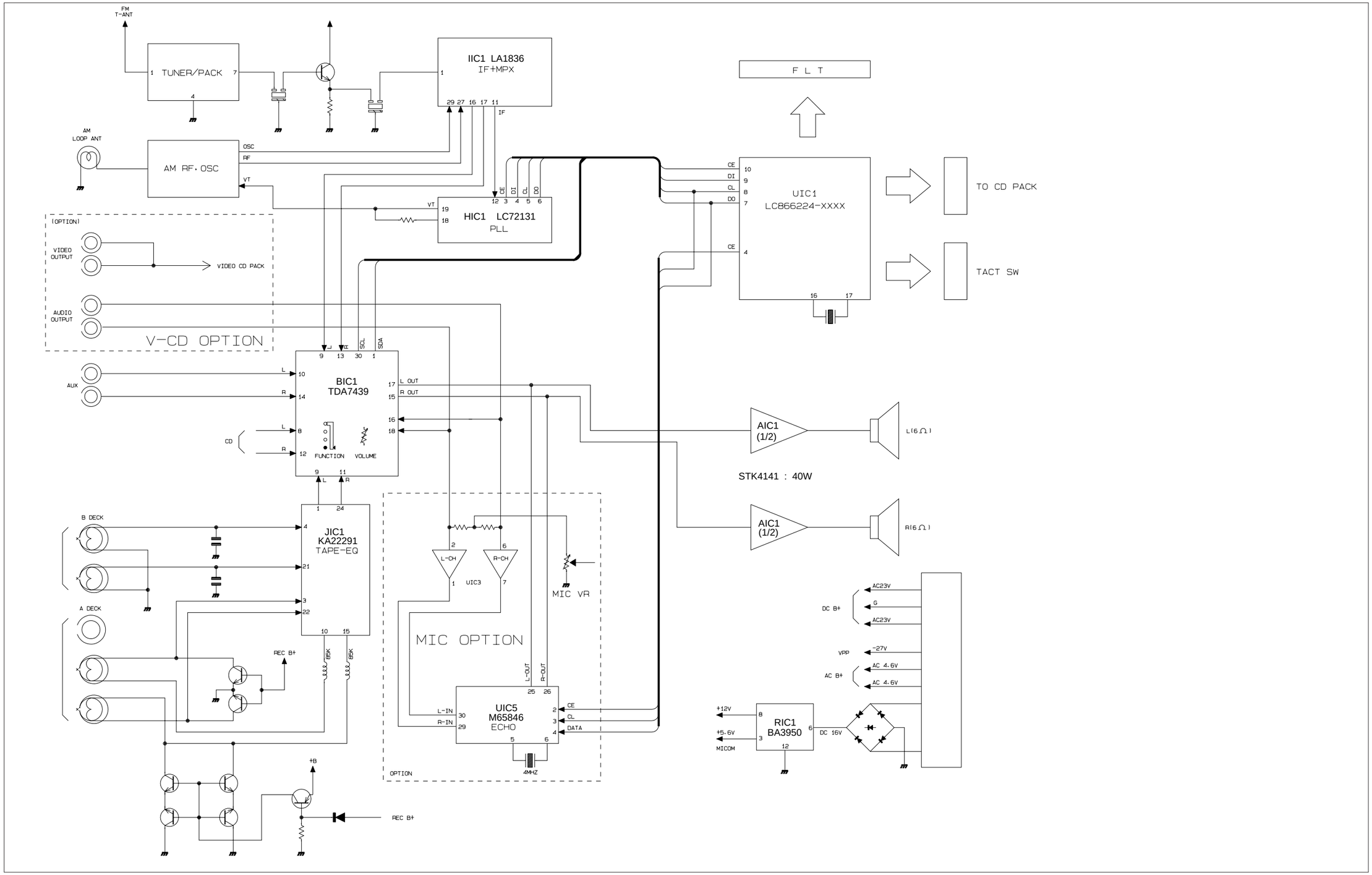
Location no.	Code no.	Description & Specifiation	Remarks
NR401	2007-000468	R-CHIP;1Kohm,5%,1/10W,DA,TP,2012	
NR500	2007-000395	R-CHIP;150Kohm,5%,1/10W,DA,TP,2012	
NR50L	2007-000586	R-CHIP;22Kohm,5%,1/10W,DA,TP,2012	
NR50R	2007-000586	R-CHIP;22Kohm,5%,1/10W,DA,TP,2012	
NR52L	2007-000774	R-CHIP;33Kohm,5%,1/10W,DA,TP,2012	
NR52R	2007-000774	R-CHIP;33Kohm,5%,1/10W,DA,TP,2012	
NR53L	2007-000872	R-CHIP;4.7Kohm,5%,1/10W,DA,TP,2012	
NR53R	2007-000872	R-CHIP;4.7Kohm,5%,1/10W,DA,TP,2012	
NR54L	2007-000468	R-CHIP;1Kohm,5%,1/10W,DA,TP,2012	
NR54R	2007-000468	R-CHIP;1Kohm,5%,1/10W,DA,TP,2012	
NR55L	2007-000872	R-CHIP;4.7Kohm,5%,1/10W,DA,TP,2012	
NR55R	2007-000872	R-CHIP;4.7Kohm,5%,1/10W,DA,TP,2012	
NR56L	2007-000290	R-CHIP;100ohm,5%,1/10W,DA,TP,2012	
NR56R	2007-000290	R-CHIP;100ohm,5%,1/10W,DA,TP,2012	
NR57L	2007-000282	R-CHIP;100Kohm,5%,1/10W,DA,TP,2012	
NR57R	2007-000282	R-CHIP;100Kohm,5%,1/10W,DA,TP,2012	
NR601	2007-000468	R-CHIP;1Kohm,5%,1/10W,DA,TP,2012	
NR602	2007-000300	R-CHIP;10Kohm,5%,1/10W,DA,TP,2012	
NR603	2007-000300	R-CHIP;10Kohm,5%,1/10W,DA,TP,2012	
NR604	2007-000468	R-CHIP;1Kohm,5%,1/10W,DA,TP,2012	
NR606	2007-000282	R-CHIP;100Kohm,5%,1/10W,DA,TP,2012	
NR804	2007-000468	R-CHIP;1Kohm,5%,1/10W,DA,TP,2012	

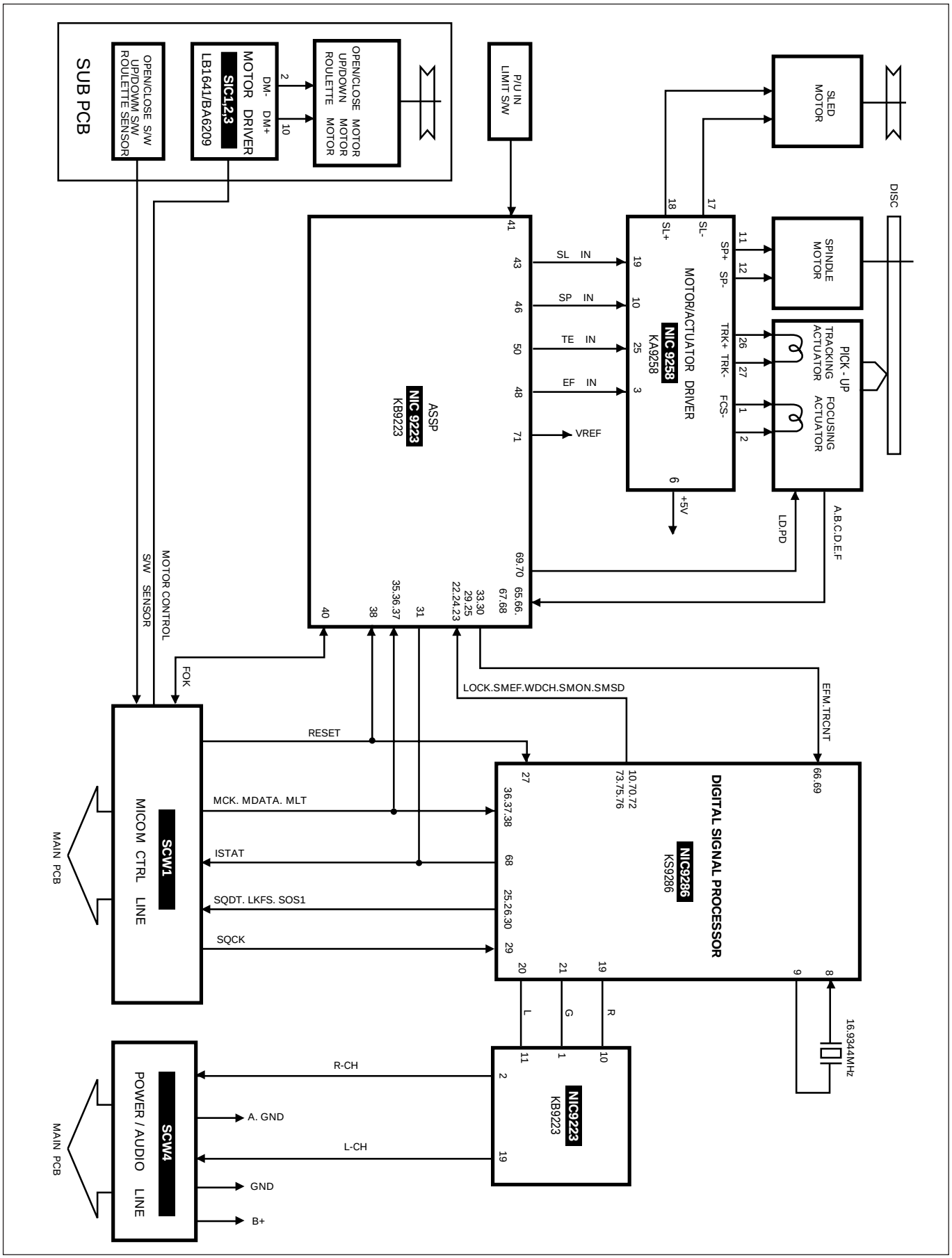
AH93-30001X ASSY-CD MAIN,AUTO;G3X8,NON ADJUST

NC105	2401-000243	C-AL;100UF,20%,10V,GP,TP,6.3X5,2.5M	
NC114	2401-000419	C-AL;10UF,20%,16V,GP,-,4X7,5	
NC117	2301-000389	C-FILM,PEF;150NF,5%,50V,TP,12.5X15X7.5,7	
NC122	2401-001238	C-AL;4.7UF,20%,25V,GP,BK,3X5,1MM	
NC501	2401-000243	C-AL;100UF,20%,10V,GP,TP,6.3X5,2.5M	
NC55L	2401-001238	C-AL;4.7UF,20%,25V,GP,BK,3X5,1MM	
NC55R	2401-001238	C-AL;4.7UF,20%,25V,GP,BK,3X5,1MM	
NC700	2401-000868	C-AL;220UF,20%,4V,GP,TP,6.3X5,2.5MM	
NC701	2401-000868	C-AL;220UF,20%,4V,GP,TP,6.3X5,2.5MM	
NC702	2401-000243	C-AL;100UF,20%,10V,GP,TP,6.3X5,2.5M	
NC703	2401-001364	C-AL;470UF,20%,16V,GP,TP,10X12MM,5M	
NC704	2401-000778	C-AL;220UF,20%,10V,GP,-,6.3X11,2.5M	
NC902	2401-000243	C-AL;100UF,20%,10V,GP,TP,6.3X5,2.5M	
NC903	2401-001238	C-AL;4.7UF,20%,25V,GP,BK,3X5,1MM	
NIC05	AC14-12001G	IC;KA78L05,T,-	
NQ1501	0501-000610	TR-SMALL SIGNAL;KSA928A-Y,PNP,1W,TO-92L,	
NR555	2008-000141	R-FUSIBLE;2.2OHM,5%,1/4W,AA,TP,2.6X6.7MM	

9. Block Diagrams

9-1 Main

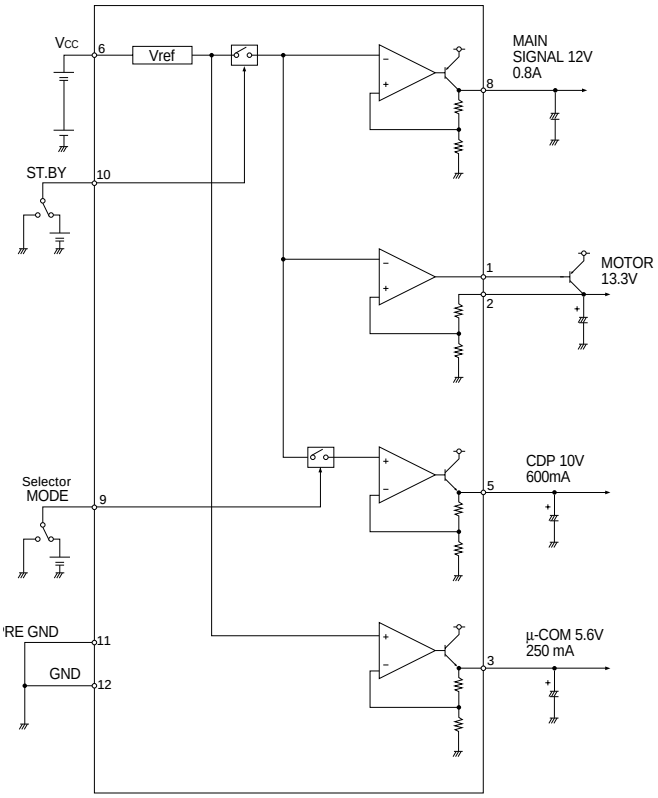



SUB PCB
OPEN/CLOSE S/W
UP/DOWM S/W
ROULETTE SENSOR
DM- DM+
MOTOR DRIVER
LB1641/BA6209
SIC1,2,3
OPEN/CLOSE MOTOR
UP/DOWN MOTOR
ROULETTE MOTOR
P/U IN
LIMIT S/W
SLED MOTOR
DISC
SPINDLE MOTOR
PICK - UP
TRACKING ACTUATOR
FOCUSING ACTUATOR
MOTOR/ACTUATOR DRIVER
NIC 9258
KA9258
SL+
SL-
SP+
SP-
TRK+
TRK-
FCS-
+5V
ASSP
NIC 9223
KB9223
SL IN
SP IN
TE IN
EF IN
VREF
LD.PD
A.B.C.D.E.F
MOTOR CONTROL
S/W SENSOR
FOK
LOCK.SMEF.WDCH.SMON.SMSD
EFM.TRCNT
RESET
MCK. MDATA. MLT
ISTAT
SQDT. LKFS. SOS1
SQCK
MICOM CTRL LINE
SCW1
MAIN PCB
DIGITAL SIGNAL PROCESSOR
NIC9286
KS9286
16.9344MHz
L
G
R
NIC9223
KB9223
R-CH
A. GND
L-CH
GND
B+
POWER / AUDIO LINE
SCW4
MAIN PCB

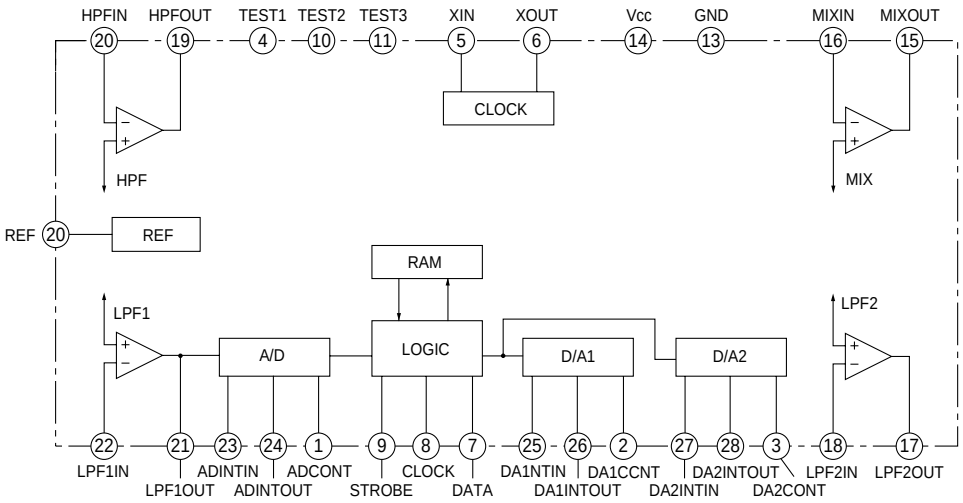
9-3 IC & TR Internal Diagrams

9-3-1 Main

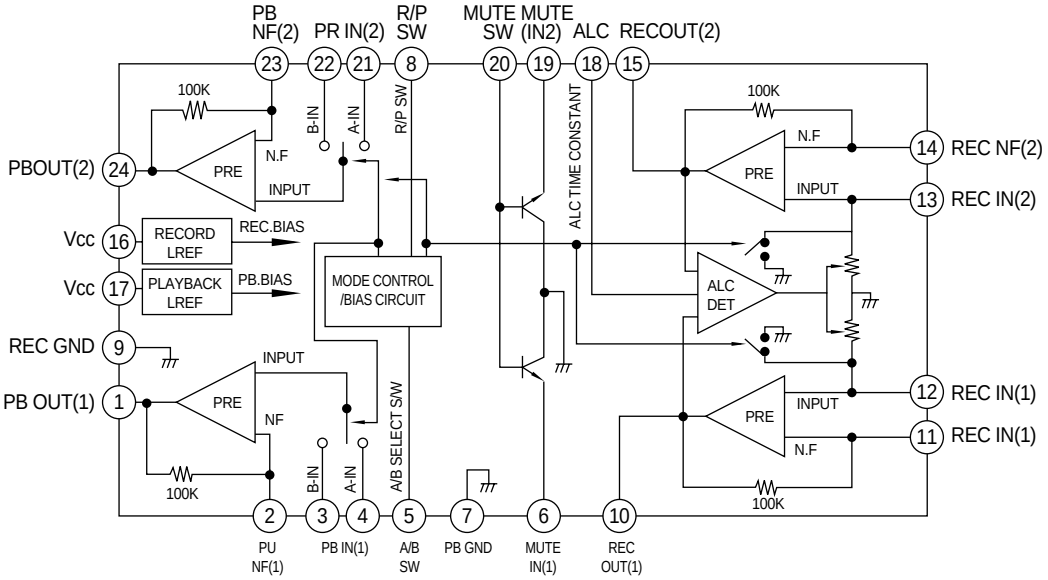
BA3950 : RIC1



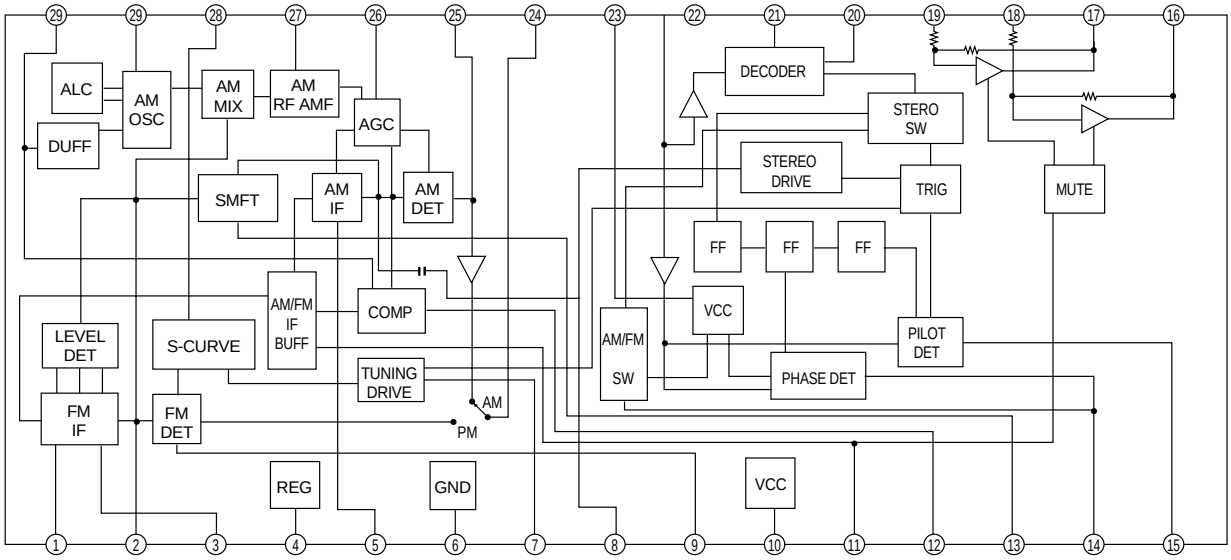
M65840 : EIC1 (OPTION KEY+CON)



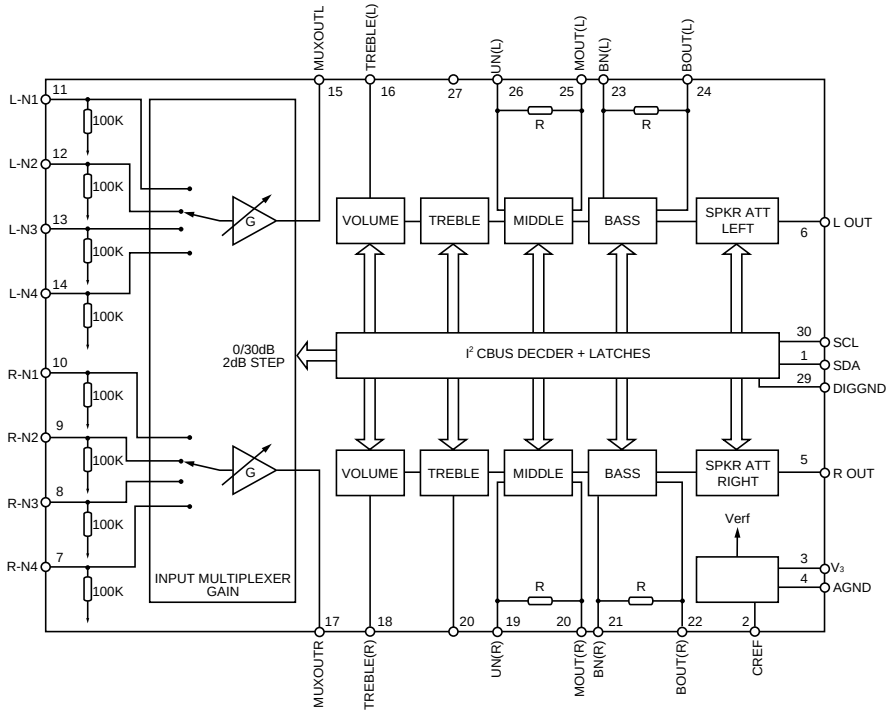
KA22291 : JIC1



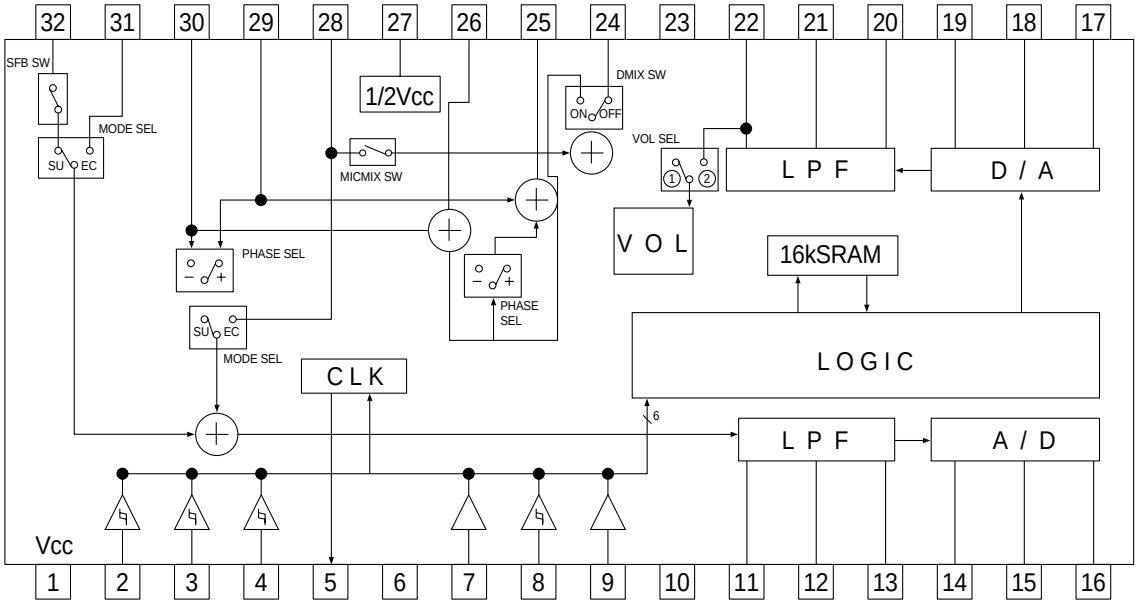
LA1836 : MIC1



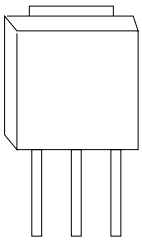
TDA7439 : BIC1



LV1015: DPIC4



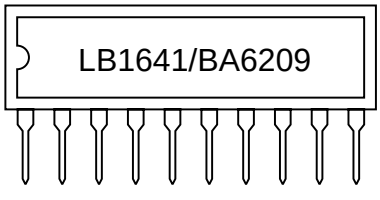
9-3-2 CD

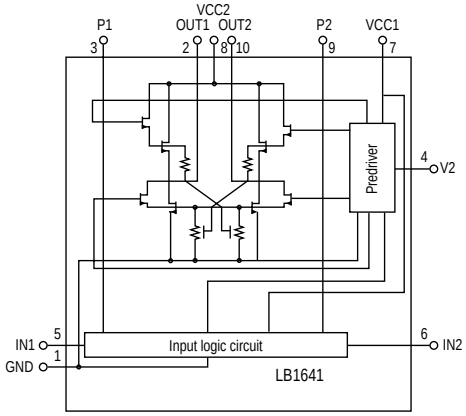


TR	1	2	3
KSR1003 A928	E	C	B

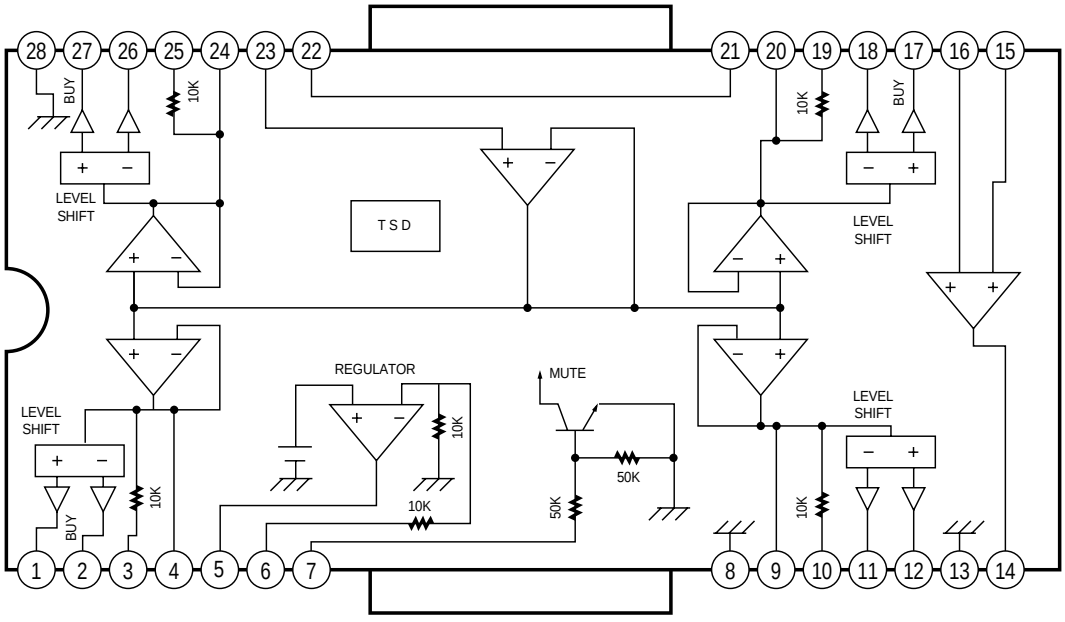
* NOTE : KSB564 = 'EBC' TYPE

LB1641/BA6209(MOTOR DRIVER) : SIC1,SIC2,SIC3,NIC1641

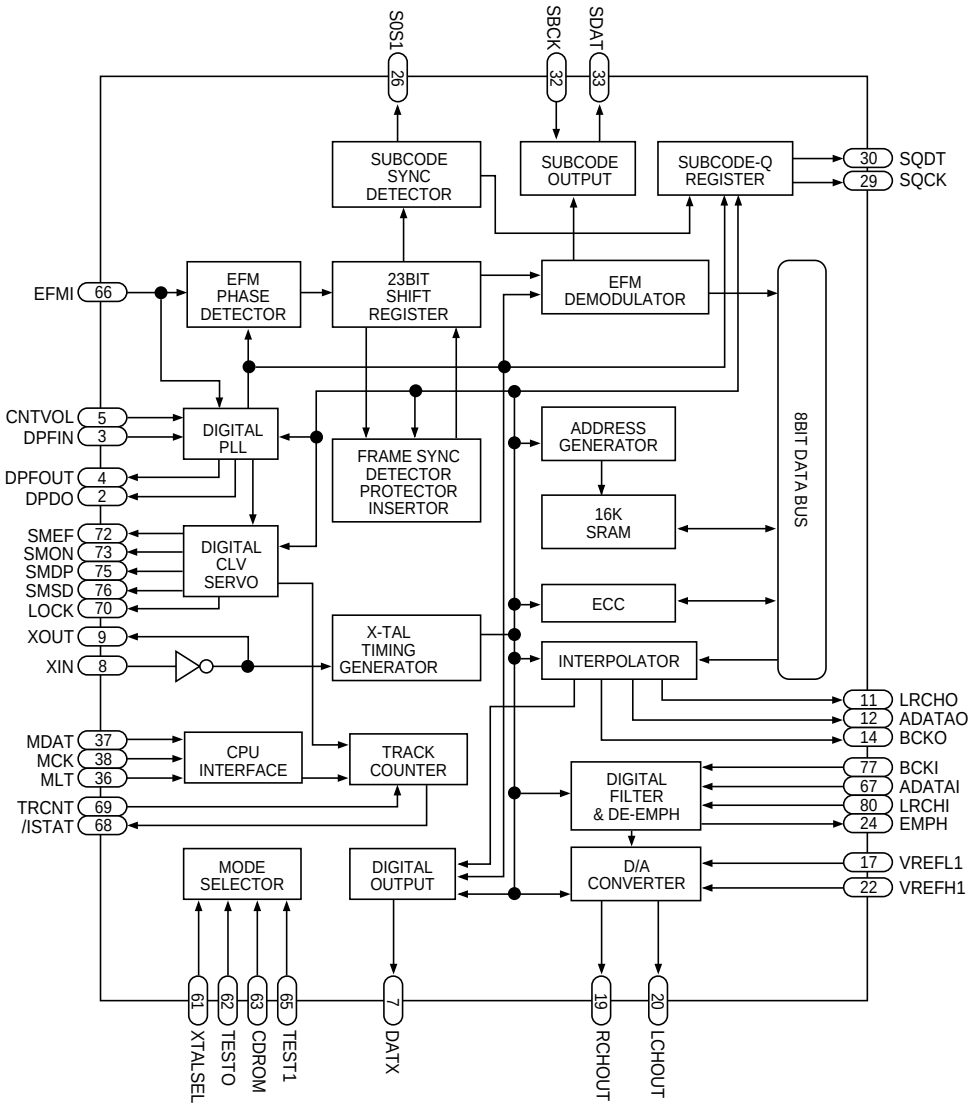




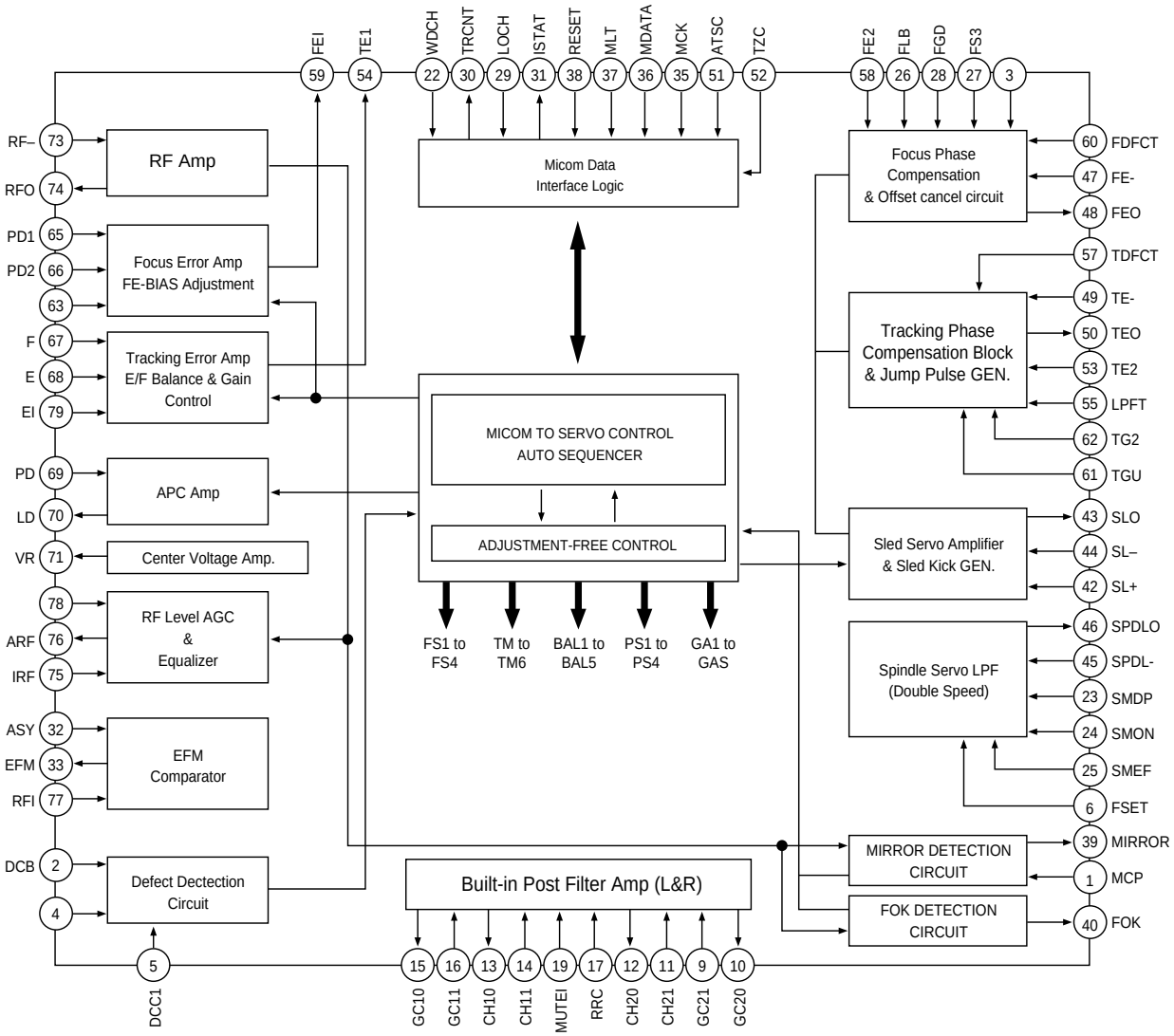
KA9258 : NIC9258



KS9286 : NIC9286



KB9223 : NIC9223



9-4 µ-COM : UIC1

No.	Port	Name	I/O	Function
1	P5 2	H-OUT	O	TAPE HIGH DUB-OUT(“L” OPEN COLLECTOR)
2	MUTE		O	MUTE
3	P2 0	MUTE	I	V-CD MUTE
4	1	CE21	O	M65846 CE1
5	2	POWER	O	POWER CONTROL
6	3	MUTE	O	TAPE REC MUTE(“L” OPEN COLLECTOR)
7	4	DO1	O	TDA7439,LC72131,M65846
8	5	CLK1	O	TDA7439,LC72131,M65846
9	6	DIO1	I	LC72131 DATA INPUT
10	7	CE	O	LC72131(PLL)CE
11	TEST		O	TEST PIN
12	RESET		I	RESET PORT
13	XT1		I	SUB OSC(CLOCK ; 32.768kHz)
14	XT2		O	SUB OSC(CLOCK ; 32.768kHz)
15	Vss		I	GROUND
16	CF1		I	MAIN OSC INPUT(12MHZ)
17	CF2		O	MAIN OSC OUTPUT(12MHZ)
18	Vdd		I	MAIN POWER INPUT PORT(5V)
19	P8 0	KEY1	I	A/D KEY INPUT1
20	1	KEY2	I	A/D KEY INPUT2
21	2	KEY3	I	TAPE KEY OPTION
22	3	MIC SE	I	MIC SENSE
23	4	KEY4	I	VOLUME UP
24	5	SD	I	TUNET SD
25	6	EQ IN	I	LEVEL A
26	7	EQ IN	I	LEVEL B
27	P7 0	PO SENS	I	POWER SENS
28	1	CD SENS	I	CD TRAY SENS
29	2	SCOR	I	SCOR INTERRUPT
30	3	REMO	I	REMOCON INPUT
31	S 0	REC	O	TAPE REC B+
32	1	EMPHA	O	EMPHA(V-CD) or SW1
33	2	G1	O	GRID CONTROL PORT OF FLT
34	3	G2	O	GRID CONTROL PORT OF FLT
35	4	G3	O	GRID CONTROL PORT OF FLT
36	5	G4	O	GRID CONTROL PORT OF FLT
37	6	G5	O	GRID CONTROL PORT OF FLT
38	7	G6	O	GRID CONTROL PORT OF FLT
39	8	G7	O	GRID CONTROL PORT OF FLT
40	9	G8	O	GRID CONTROL PORT OF FLT
41	10	G9	O	GRID CONTROL PORT OF FLT
42	11	G10	O	GRID CONTROL PORT OF FLT
43	12	G11	O	GRID CONTROL PORT OF FLT
44	13	G12	O	GRID CONTROL PORT OF FLT
45	14	S1	O	GRID CONTROL PORT OF FLT
46	15	S2	O	GRID CONTROL PORT OF FLT
47	Vdvp	+5.6V		CONTROL MODE POWER INPUT PORT OF FLT(5V)
48	Vp	-30V	O	GRID CONTROL MODE POWER INPUT PORT OF FLT(5V)
49	S 16	S3	O	SEGMENT CONTROL PORT OF FLT
50	S 17	S4	O	SEGMENT CONTROL PORT OF FLT

No.	Port	Name	I/O	Function
51	S 18	S5	O	SEGMENT CONTROL PORT OF FLT
52	19	S6	O	SEGMENT CONTROL PORT OF FLT
53	20	S7	O	SEGMENT CONTROL PORT OF FLT
54	21	S8	O	SEGMENT CONTROL PORT OF FLT
55	22	S9	O	SEGMENT CONTROL PORT OF FLT
56	23	S10	O	SEGMENT CONTROL PORT OF FLT
57	24	S11	O	SEGMENT CONTROL PORT OF FLT
58	25	S12	O	SEGMENT CONTROL PORT OF FLT
59	26	S13	O	SEGMENT CONTROL PORT OF FLT
60	27	S14	O	SEGMENT CONTROL PORT OF FLT
61	28	S15	O	SEGMENT CONTROL PORT OF FLT
62	29	S16	O	SEGMENT CONTROL PORT OF FLT
63	30	S17	O	SEGMENT CONTROL PORT OF FLT
64	31	S18	O	SEGMENT CONTROL PORT OF FLT
65	P0 0	OPTION	I	TUNER, CD/VIDEO CD
66	1	SENSE	I	SENSE
67	2	FOK	I	FOCUS OK
68	3	LKFS	I	GFS
69	4	MLT	O	DSP/SSP CONTROL LATCH
70	5	MDATA	O	DSP/SSP CONTROL DATA
71	6	MCLK	O	DSP/SSP CONTROL CLOCK
72	7	LAT	O	LAT
73	P1 0	LD-XPS	O	XRST
74	1	SUBQ	I	SUBQ DATA INPUT
75	2	SQCK	O	SUBQ RECEIVE CLOCK
76	3	DSP MT	O	DSP MUTE
77	4	OPEN M	O	CD OPEN MOTOR
78	5	CLOSE M	O	CD CLOSE MOTOR
79	6	ROUL -	O	ROULETTE MOTOR -
80	7	ST LED	O	STEREO LED
81	P3 0	ISTAT	I	SENSE
82	1	TR-CUT	O	TR-CUT
83	2	TUNER	O	TUNER LED
84	3	VOLUME	O	VOLUME DOWN
85	4	CLATCH	O	LATCH(VIDEO CD → MAIN)
86	5	CDATA	O	DATA(VIDEO CD → MAIN)
87	6	VCLK	I	CLOCK(VIDEO CD → MAIN)
88	7	V DATA	I	→
89	Vss	Vss		GROUND
90	Vdd	Vdd		MAIN POWER INPUT PORT(5V)
91	P4 0	V LATCH	I	LATCH(CD-VCD)
92	1	OPEN	O	OPEN S/W
93	2	CLOSE	O	CLOSE S/W
94	3	TAPE	O	TAPE LED
95	4	AUX	O	AUX LED
96	5	RESET	O	RESET (V-CD) or SW2
97	6	MOTOR	O	TAPE MOTOR ON
98	7	MUTE	O	PLAY MUTE
99	P5 0	TUNER	O	TUNER CTRL
100	P5 1	CD	O	CD LED

9-5 RF AMP & Servo Processor(KB9223) : NIC9223

No.	Port	Description
1	MCP	Capacitor connection pin for mirror hold
2	DCB	Capacitor connection pin for defect Bottom hold
3	FRSH	Capacitor connection pin for time constant to generate focus search waveform
4	DCC2	The input pin through capacitor of defect bottom hold output
5	DCC1	The output pin of defect bottom hold
6	FSET	The peak frequency setting pin for focus, tracking servo and cut offf frequency of CLV LPF
7	VDDA	Analog VCC for servo part
8	VCCP	Vcc for post filter
9	GC21	Amplifier negative input pin for gain and low pass filtering of DAC output CH2
10	GC20	Amplifier output pin for gain and low pass filtering of DAC output CH2
11	CH2I	The input pin for post filter channel2
12	GC2O	The output pin for post filter channel2
13	CH1O	The output pin for post filter channel1
14	CH1I	The input pin for post filter channel1
15	GC1O	Amplifier output pin for gain and low pass filtering of DAC output CH1
16	GC1I	Amplifier negative input pin for gain and low pass filtering of DAC output CH1
17	RRC	The pin for noise reduction of post filter bias
18	VSSP	VSS for post filter
19	MUTEI	The input pin for post filter muting control
20	ISET	The input pin for current setting of focus search, track jump and sled kick voltage
21	VREG	The output pin of regulator
22	WDCK	The clock input pin for auto sequence
23	SMDP	The input pin of CLV control output pin SMDP of DSP
24	SMON	The input pin for spindle servo ON through SMON of DSP
25	SMEF	The input pin of provide for an external LPF time constant
26	FLB	Capacitor connection pin to perform rising low bandwidth of focus loop
27	FS3	The pin for high frequency gain change of focus loop withe internal FS3 pin switch
28	FGD	Reducing high frequency gain with capacitor between FS3 pin
29	LOCK	Sled runaway prevention pin
30	TRCNT	Track count output pin
31	ISTAT	Internal status output pin
32	ASY	The input pin for asymmetry control
33	EFM	EFM comparator output pin
34	VSSA	Analog VSS for sevo part
35	MCK	Micom clock input pin
36	MDATA	Micom data input pin
37	MLT	Micom data latch input pin
38	RESET	Reset input pin
39	MIRROR	The mirror output for test
40	FOK	The output pin of focus OK comparator

No.	Port	Description
41	SSTOP	The pin for detection whether pick_up position is innermost or not
42	SL+	The noninverting input pin of sled servo amplifier
43	SLO	The output pin of sled servo amplifier
44	SL-	The inverting input pin of sled servo amplifier
45	SPDL-	The noninverting input pin of spindle servo amplifier
46	SPDLO	The output pin of spindle servo amplifier
47	FE-	The inverting input pin of focus servo amplifier
48	FEO	The output pin of focus servo amplifier
49	TE-	The inverting input pin of tracking servo amplifier
50	TEO	The output pin of tracking servo amplifier
51	ATSC	The input pin for Anti-shock detection
52	TZC	The comaparator input pin for tracking zero crossing detection
53	TE2	Tracking servo input pin
54	TE1	Tracking error amplifier output pin
55	LPFT	The input pin of tracking error low pass filtering signal
56	DVDD	The power supply pin for logic circuit
57	TDFCT	The capacitor connectiong pin for tracking defect compensation
58	FE2	Focus servo input pin
59	FE1	Focus error amplifier output pin
60	FDFCT	The capacitor connection pin for focus defect compensation
61	TGU	The capacitor connection pin for high frequency tracking gain switch
62	TG2	The pin for high frequency gain change of tracking servo loop with internal TG2 switch
63	FEBIAS	Focus error bias voltage control pin
64	DVEE	The DVEE pin for logic circuit
65	PD1	The negative input pin of RF I/V amplifier1(A+C signal)
66	PD2	The negative input pin of RF I/V amplifier2(B+D signal)
67	F	The negative input pin of F I/V amplifier(F signal)
68	E	The negative input pin of E I/V amplifier(E signal)
69	PD	The input pin for APC
70	LD	The output pin for APC
71	VR	The output pin of (AVEE+AVCC)/2 voltage
72	VCC	VCC for RF part
73	RF-	RF summing amplifier inverting input pin
74	RFO	RF summing amplifier output pin
75	IRF	The input pin for AGC
76	ARF	The output pin for AGC
77	RFI	The input pin for EFM comparating
78	CAGC	The capacitor connection pin for AGC
79	EI	Feedback input pin of E I/V amplifier for EF Balance control
80	GND	GND for RF part

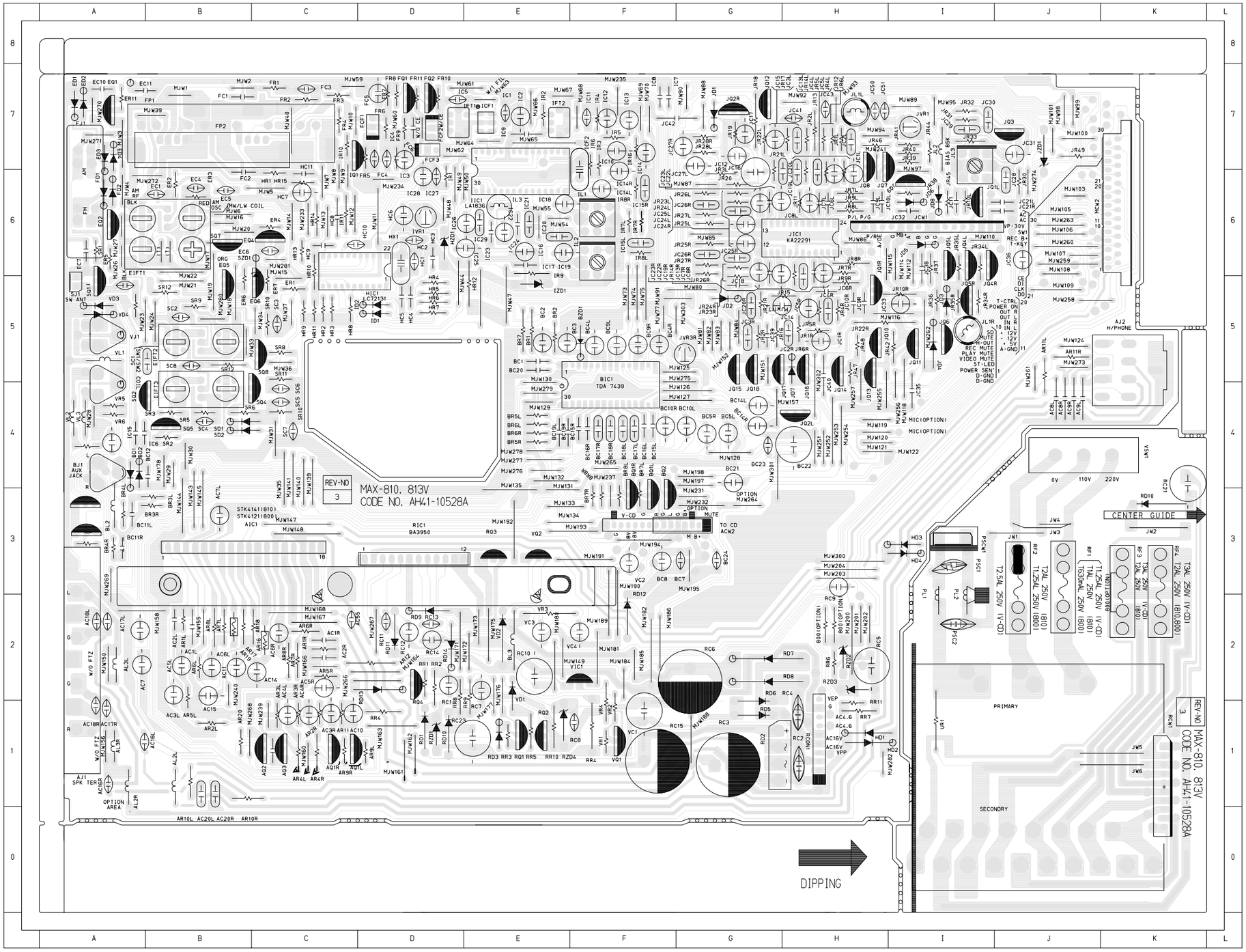
9-6 Digital Signal Processor(KS9286) : NIC9286

No.	Port	Port	Description
1	AVDD1	-	Analog VCC1
2	DPDO	O	Charge pump output for Digital PLL
3	DPFIN	I	Filter input for Digital PLL
4	DPFOUT	O	Filter output for Digital PLL
5	CNTVOL	I	VCO control voltage for Digital PLL
6	AVSS1	-	Analog Ground1
7	DATX	O	Digital Audio output data
8	XIN	I	X'tal oscillator input
9	XOUT	O	X'tal oscillator output
10	WDCHO	O	Word clock output of 48 bit/Slot (88.2KHz)
11	LRCHO	O	Channel clock output of 48 bit/Slot (44.1KHz), 88.2KHz when ESP ON
12	ADATAO	O	Serial audio data output of 48 bit/Slot (MSB first), double speed output when ESP ON
13	DVSS1	-	Digital Ground1
14	BCKO	O	Audio data bit clock output of 48 bit/Slot(2.1168MHz), 4.2336MHz when ESP ON
15	C2PO	O	C2 Pointer for output audio data
16	VREFL2	I	Input terminal2 of reference voltage "L"(Floating)
17	VREFL1	I	Input terminal2 of reference voltage "L"(GND connection
18	AVDD2	-	Analog VCC2
19	RCHOUT	O	Right-Channel audio output through D/A converter
20	LCHOUT	O	Left-Channel audio output through D/A converter
21	AVSS2	-	Analog ground2
22	VREFH1	I	Input termial1 of reference voltage "H" (VDD connection)
23	VREFH2	I	Input termial2 of reference voltage "H" (Floating)
24	EMPH	O	Emphasis/Non-Emphasis output, H: Emphasis ON, L: Emphasis OFF
25	LKFS	O	The Lock Statu output of frame sync
26	S0S1	O	Output of subcode sync signal(S0+S1)
27	RESET	I	System reset at "L"
28	/ESP	I	ESP function ON/OFF control("L": ESP function ON, "H": ESP function OFF)
29	SQCK	I	Clock for output Subcode-Q data
30	SQDT	O	Serial output of Subcode-Q data
31	SQOK	O	The CRC (Cycle Redundancy Check) check result signal output of Subcode-Q)
32	SBCK	I	Clock for output subcode data
33	SDAT	O	Subcode serial data output
34	DVDD1	-	Digital VDD1
35	MUTE	I	Mute control input ("H": Mute ON)
36	MLT	I	Latch Signal input from Micom (Schmit Trigger)
37	MDAT	I	Latch Signal input from Micom (Schmit Trigger)
38	MCK	I	Latch Signal input from Micom (Schmit Trigger)
39	DB8	I/O	SRAM data I/O port8 (MSB)
40	DB7	I/O	SRAM data I/O port7

No.	Port	Port	Description
41	DB6	I/O	SARM data I/O port 6
42	DB5	I/O	SARM data I/O port 5
43	DB4	I/O	SARM data I/O port 4
44	DB3	I/O	SARM data I/O port 3
45	DB2	I/O	SARM data I/O port 2
46	DB1	I/O	SARM data I/O port 1 (LSB)
47	C1F1	I/O	Monitoring output for C1 error correctiong (RA1)
48	C1F2	I/O	Monitoring output for C1 error correctiong (RA2)
49	C2F1	I/O	Monitoring output for C2 error correctiong (RA3)
50	C2F2	I/O	Monitoring output for C21 error correctiong (RA4)
51	C2FL	I/O	C2 decoder flag (RA5, “H” : When the processing C2 code is impossible correction status.)
52	/PBCK	I/O	Output of VCO/2 (4.3218MHz) (RA6)
53	DVSS2	I/O	Digital ground2
54	FSDW	I/O	Window or unprotected frame sync (RA7)
55	ULKFS	I/O	Frame sync protection state (RA8)
56	/JIT	I/O	Display of either RAM overflow or underflow for ±4 frame jitter margin (RA9)
57	C4M	I/O	Only monitoring signal (4.2336MHz) (RA10)
58	C16M	I/O	16.9344MHz signal output (RA11)
59	/WE	I/O	Terminal for test
60	/CS	I/O	Terminal for test
61	XTALSEL	I	Mode Selection1 (H: 33.8688MHz, L:16.9344MHz)
62	TEST0	I	TEST input terminal (GND connection)
63	CDROM	I	Mode Selection2 (H: CD-ROM, L: CDP)
64	SRAM	I	TEST input terminal (GND connection)
65	TEST1	I	TEST input terminal (GND connection)
66	EFMI	I	EFM signal input
67	ADATAI	I	Serial audio data input of 48 bit/Slot (MSB first)
68	/ISTAT	O	The internal status output
69	TRCNT	I	Tracking counter input signal
70	LOCK	O	Output signal of LKFS condition sampled PBFR/16 (if LKFS is “H”, LOCK is “H”, if LKFS is sampled “L” at least 8 times by PBFR/16, LOCK is “L”)
71	PBFR	O	Write frame clock (Lock: 7.35KHz)
72	SMEF	O	LPF time constant control of the spindle srvo error signal
73	SMON	O	ON/OFF control signal for spindle servo
74	DVDD2	-	Digital VDD2
75	SMDP	O	Spindle Motor drive (Rough control in the SPEED mode, Phase control in the PHASE mode)
76	SMSD	O	Spindle Motor drive (Velocity control in the PHASE mode)
77	BCKI	I	Audio data bit clock input of 48 bit/Slot (2.1168MHz)
78	TESTV	I	TEST input terminal (GND connection)
79	DSPEED	I	TEST input terminal (VDD connection)
80	LRCHI	I	Channel clock input of 48 bit/Slot (44.1KHz)

10. PCB Diagrams

10-1 Main



*** RESISTOR ***

AR10L (B1)
AR10R (B1)
AR11 (C1)
AR11L (J4)
AR11R (J5)
AR12 (C2)
AR17 (B2)
AR18 (C2)
AR1L (B2)
AR1R (C2)
AR20 (B1)
AR2L (B1)
AR2R (C1)
AR3L (C1)
AR3R (C1)
AR4L (C1)
AR4R (C1)
AR5L (B1)
AR5R (C2)
AR6L (B2)
AR6R (C2)
AR7L (B2)
AR7R (C2)
AR8L (B2)
AR8R (C2)
AR9L (D1)
AR9R (C1)
BR1 (E5)
BR2 (E5)
BR3L (A3)
BR3R (A3)
BR4L (A3)
BR4R (A3)
BR5L (E4)
BR5R (E4)
BR6L (E4)
BR6R (E4)
BR7 (E5)
BR7L (F3)
BR7R (F3)
BR8L (F3)
BR8R (F3)
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ER11 (A7)
ER2 (B6)
ER3 (B6)
ER4 (C6)
ER5 (A6)
ER6 (B5)
ER7 (C5)
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FR11 (D7)
FR2 (C7)
FR3 (C7)
FR4 (C7)
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FR8 (D7)
FR9 (D7)
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HR5 (D5)
HR6 (D5)
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HR8 (C5)
HR9 (C5)
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JR14L (H6)
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JR16 (G5)
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JR22L (G7)
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JR2R (G5)
JR30 (J6)
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JR34R (I5)
JR35L (I5)
JR35R (I5)
JR36 (I5)
JR37 (I5)
JR38 (I6)
JR39 (I7)
JR3L (G6)
JR40 (I7)
JR41 (I7)
JR42 (I5)
JR44 (I7)
JR45 (I6)
JR46 (H7)
JR47 (H4)
JR48 (H5)
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JR4R (H5)
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JR5R (H5)
JR6L (H7)
JR6R (H5)
JR7L (H6)
JR7R (H6)
JR8L (H6)
JR8R (H6)
JR9L (H6)
JR9R (H5)
RR1 (D2)
RR10 (E1)
RR11 (H1)
RR2 (D1)
RR3 (E1)
RR4 (D1)
RR5 (E1)
RR6 (H2)
RR7 (H1)
RR8 (D1)
RR9 (E1)
SR1 (A6)
SR10 (C4)
SR10 (C5)
SR11 (C5)
SR12 (B5)
SR12 (B5)
SR2 (B4)
SR3 (B4)
SR6 (B4)
SR8 (C5)
SR9 (B5)
UR1 (I1)
VR1 (F1)
VR2 (F1)
VR3 (E2)
VR4 (F1)
VR5 (A4)
VR6 (A4)

*** CONDENSER ***

AC10 (C1)
AC11 (B2)
AC14 (C2)
AC15 (B2)
AC16L (A1)
AC16R (A1)
AC17L (A2)
AC17R (A1)
AC18L (A2)
AC18R (A1)
AC1L (B2)
AC1R (C2)
AC20L (B1)
AC20R (B1)
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AC4L (C1)
AC4R (C1)
AC55 (C2)
AC5L (B2)
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AC6L (B2)
AC6R (C2)
AC7 (A2)
AC7L (B3)
AC8L (J4)
AC8R (J4)
AC9L (J4)
AC9R (J4)
BC1 (E5)
BC10L (G4)
BC10R (F4)
BC11L (A3)
BC11R (A3)
BC12 (B4)
BC14L (G4)
BC14R (G4)
BC15L (F4)
BC15R (F4)
BC16L (F4)
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BC17L (F4)
BC17R (F4)
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BC18R (F4)
BC19L (E4)
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BC24 (G3)
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BC4L (F5)
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BC7 (G3)
BC8 (F3)
BC9L (F5)
BC9R (F5)
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EC10 (A7)
EC11 (A7)
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EC6 (C6)
EC7 (A6)
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FC2 (B6)
FC3 (C7)
FC4 (D7)
FC5 (D7)
FC6 (D7)
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HC10 (C6)
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HC2 (D6)
HC3 (D6)
HC4 (D5)
HC5 (D5)
HC6 (D6)
HC7 (C6)
HC8 (C6)
HC9 (C6)
IC1 (E7)
IC10 (F7)
IC11 (F7)
IC12 (F7)
IC13 (F7)
IC14 (F7)
IC14L (F6)
IC14R (F6)
IC15 (A4)
IC15L (F6)
IC15R (F6)
IC16 (E6)
IC17 (E6)
IC18 (E6)
IC19 (E6)
IC2 (E7)
IC20 (E6)
IC21 (E6)
IC22 (E6)
IC23 (E6)
IC24 (E6)
IC25 (D6)
IC26 (E6)
IC27 (D6)
IC28 (D6)
IC29 (E6)
IC3 (D7)
IC4 (D7)
IC5 (D7)
IC6 (A4)
IC7 (F7)
IC8 (F7)
IC9 (E7)
JC10L (H6)
JC10R (H5)
JC11 (I6)
JC12 (G7)
JC13L (H6)
JC13R (H5)
JC14 (H5)
JC15 (G7)
JC16 (G6)
JC17 (G7)
JC18 (G5)
JC19L (G6)
JC19R (G6)
JC1L (H6)
JC1R (H5)
JC20L (H6)
JC20R (G5)
JC21L (I6)
JC21R (I6)
JC22L (G6)
JC22R (G5)
JC23L (G6)
JC23R (G6)
JC24L (G6)
JC24R (G6)
JC25L (G6)
JC25R (G6)
JC26R (G6)
JC26R (G6)
JC27L (G7)
JC27R (G7)
JC28 (J6)
JC29 (I7)
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JC2R (H5)
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JC32 (I6)
JC33 (I5)
JC35 (I4)
JC36 (J6)
JC38 (I5)
JC39 (G5)
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JC3R (G5)
JC40 (H4)
JC41 (H7)
JC42 (F7)
JC43 (H7)
JC4L (H6)
JC4R (H5)
JC50 (H7)
JC51 (H7)
JC5L (H6)
JC5R (H5)
JC6L (H6)
JC6R (H5)
JC7L (H6)
JC7R (H5)
JC8L (H6)
JC8R (H6)
JC9L (H6)
JC9R (H5)
PSC1 (I3)
PSC2 (I2)
RC1 (D2)
RC10 (E2)
RC11 (D2)
RC12 (D2)
RC13 (D2)
RC14 (D2)
RC2 (H1)
RC21 (K4)
RC23 (E1)
RC4 (H1)
RC5 (H2)
RC7 (E2)
RC8 (F1)
RC9 (H3)
SC1 (B5)
SC2 (B5)
SC3 (C5)
SC4 (B4)
SC5 (C4)
SC6 (C4)
SC7 (C4)
SC8 (B5)
VC1 (F1)
VC2 (F3)
VC3 (E2)
VC4 (F2)

*** DIODE ***

BD1 (A4)
BD2 (A4)
BZD1 (F5)
ED1 (A7)
ED2 (A7)
ED3 (A6)
ED4 (A7)
FD1 (A6)
FD2 (A6)
HD1 (H1)
HD2 (I1)
HD3 (H3)
HD4 (I3)
ID1 (D5)
ID2 (D5)
JD1 (G7)
JD2 (G5)
JD3 (I5)
JD4 (I5)
JD5 (I6)
JD6 (I6)
JD7 (H5)
JD8 (I6)
RD13 (D2)
RD14 (D2)
RD3 (E1)
RD9 (D2)
SD1 (B4)
SD2 (B4)
SZD1 (C6)
VD3 (A5)
VD4 (A5)

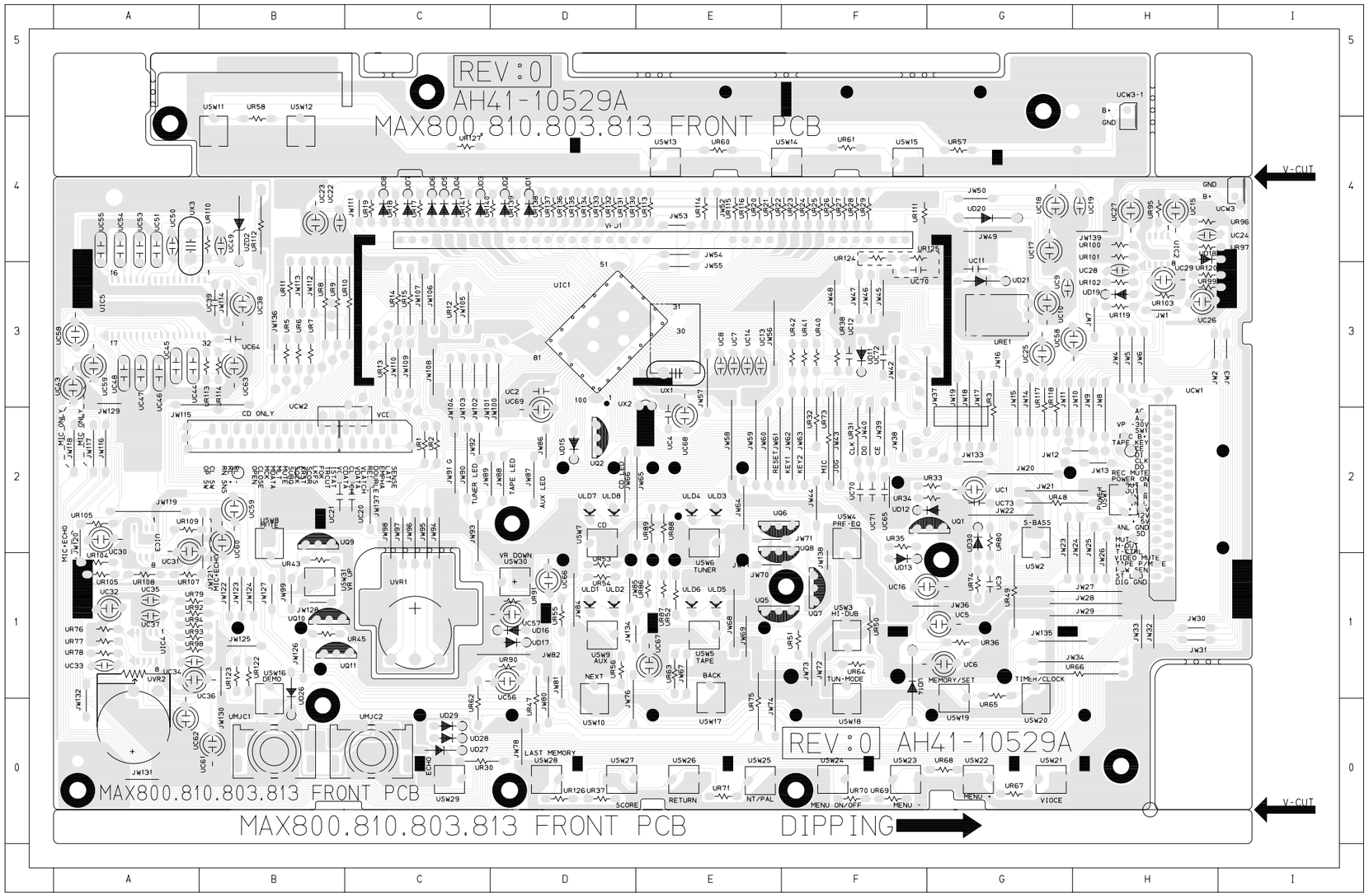
*** TR ***

AQ1L (C1)
AQ1R (C1)
AQ2 (C1)
AQ3 (C1)
BQ1L (F4)
BQ1R (F4)
BQ2 (F4)
EQ1 (A7)
EQ2 (A6)
EQ4 (C6)
EQ5 (B6)
EQ6 (C6)
FQ1 (D7)
FQ2 (D7)
IQ1 (C7)
JQ10 (H5)
JQ11 (I5)
JQ12 (G7)
JQ13 (H5)
JQ14 (H5)
JQ15 (G5)
JQ16 (H5)
JQ17 (G5)
JQ18 (G5)
JQ1L (I6)
JQ1R (H5)
JQ2L (H4)
JQ2R (G7)
JQ3 (J7)
JQ4L (I6)
JQ4R (I6)
JQ5L (I6)
JQ5R (I5)
JQ6 (I5)
JQ7 (H7)
JQ8 (H7)
JQ9 (I6)
RQ1 (E1)
RQ2 (E1)
RQ3 (E3)
RQ4 (D2)
SQ1 (A6)
SQ2 (B4)
SQ4 (C5)
SQ5 (B4)
SQ7 (B6)
SQ8 (C5)
VIC1 (F2)
VQ1 (F1)
VQ2 (E3)

*** IC&WAFER ***

AJ2 (K5)
SJ1 (A5)

10-2 Front



*** RESISTOR ***

UR1 (C2)
UR10 (C3)
UR100 (H4)
UR101 (H4)
UR102 (H3)
UR103 (H3)
UR104 (A1)
UR105 (A2)
UR105 (A1)
UR107 (A1)
UR108 (A1)
UR109 (A2)
UR11 (B3)
UR110 (B4)
UR111 (F4)
UR113 (B3)
UR113 (E4)
UR114 (E4)
UR114 (B3)
UR115 (E4)
UR116 (E4)
UR117 (G2)
UR118 (G2)
UR119 (H3)
UR12 (C3)
UR120 (I3)
UR122 (B1)
UR123 (B1)
UR124 (F4)
UR125 (F4)
UR126 (D0)
UR127 (C4)
UR13 (C3)
UR130 (E4)
UR131 (D4)
UR132 (D4)
UR133 (D4)
UR134 (D4)
UR135 (D4)
UR136 (D4)
UR137 (D4)
UR138 (D4)
UR139 (D4)
UR14 (C3)
UR140 (D4)
UR141 (C4)
UR15 (C3)
UR17 (C4)
UR18 (C4)
UR19 (C4)
UR2 (C2)
UR20 (E4)
UR21 (E4)
UR22 (F4)
UR23 (F4)
UR24 (F4)
UR25 (F4)
UR26 (F4)
UR27 (F4)
UR28 (F4)
UR29 (F4)
UR3 (G2)
UR30 (C0)
UR31 (F2)
UR32 (F2)
UR33 (G2)
UR34 (G2)
UR35 (F2)
UR36 (G1)
UR37 (D0)
UR38 (F3)
UR40 (F3)
UR41 (F3)
UR42 (F3)
UR43 (B1)
UR45 (B1)
UR47 (D0)
UR48 (G2)
UR49 (G1)
UR5 (B3)
UR50 (F1)
UR51 (F1)
UR52 (E1)
UR53 (D1)
UR54 (D1)
UR55 (D1)
UR56 (D1)
UR57 (G4)
UR58 (B4)
UR6 (B3)
UR60 (E4)
UR61 (F4)
UR62 (C0)
UR63 (E1)
UR64 (F1)
UR65 (G1)
UR66 (G1)
UR67 (G0)
UR68 (G0)
UR69 (F0)
UR7 (B3)
UR70 (F0)
UR71 (E0)
UR73 (F2)
UR74 (G1)
UR75 (E0)
UR76 (A1)
UR77 (A1)
UR78 (A1)
UR79 (B1)
UR8 (B3)
UR80 (G1)
UR86 (E1)
UR87 (E1)
UR88 (E2)
UR89 (E2)
UR9 (B3)
UR90 (D1)
UR91 (D1)
UR92 (B1)
UR93 (B1)
UR94 (B1)
UR95 (H4)
UR96 (I4)
UR97 (I4)
UR98 (B1)
UR99 (I3)
UX1 (E3)
UX2 (E3)
UX3 (A4)

*** CONDENSER ***

UC1 (G2)
UC10 (G3)
UC11 (G3)
UC12 (F3)
UC13 (E3)
UC14 (E3)
UC15 (H4)
UC16 (F1)
UC17 (G3)
UC18 (G4)
UC19 (H4)
UC2 (D3)
UC20 (C2)
UC21 (B2)
UC22 (B4)
UC23 (B4)
UC24 (I4)
UC25 (G3)
UC26 (H3)
UC27 (H4)
UC28 (H3)
UC29 (H3)
UC3 (G1)
UC30 (A2)
UC31 (B2)
UC32 (A1)
UC33 (A1)
UC34 (B1)
UC35 (A1)
UC36 (A1)
UC37 (A1)
UC38 (B3)
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UC4 (E2)
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UC45 (A3)
UC46 (A3)
UC47 (A3)
UC48 (A3)
UC49 (B4)
UC5 (G1)
UC50 (A4)
UC51 (A4)
UC53 (A4)
UC54 (A4)
UC55 (A4)
UC56 (D1)
UC57 (D1)
UC58 (H3)
UC58 (A3)
UC59 (A3)
UC59 (B2)
UC6 (G1)
UC60 (B1)
UC61 (B0)
UC62 (A0)
UC63 (B3)
UC64 (B3)
UC65 (F2)
UC66 (D1)
UC67 (E1)
UC68 (E2)
UC69 (D2)
UC7 (E3)
UC70 (F2)
UC70 (F3)
UC71 (F2)
UC72 (F3)
UC73 (G2)
UC8 (E3)
UC9 (G3)

*** DIODE ***

UD1 (D4)
UD11 (F3)
UD12 (F2)
UD13 (F1)
UD14 (F1)
UD15 (D2)
UD16 (D1)
UD17 (D1)
UD18 (I4)
UD19 (H3)
UD2 (D4)
UD20 (G4)
UD21 (G3)
UD26 (B0)
UD27 (C0)
UD28 (C0)
UD29 (C0)
UD3 (C4)
UD30 (G2)
UD4 (C4)
UD5 (C4)
UD6 (C4)
UD7 (C4)
UD8 (C4)

*** TR ***

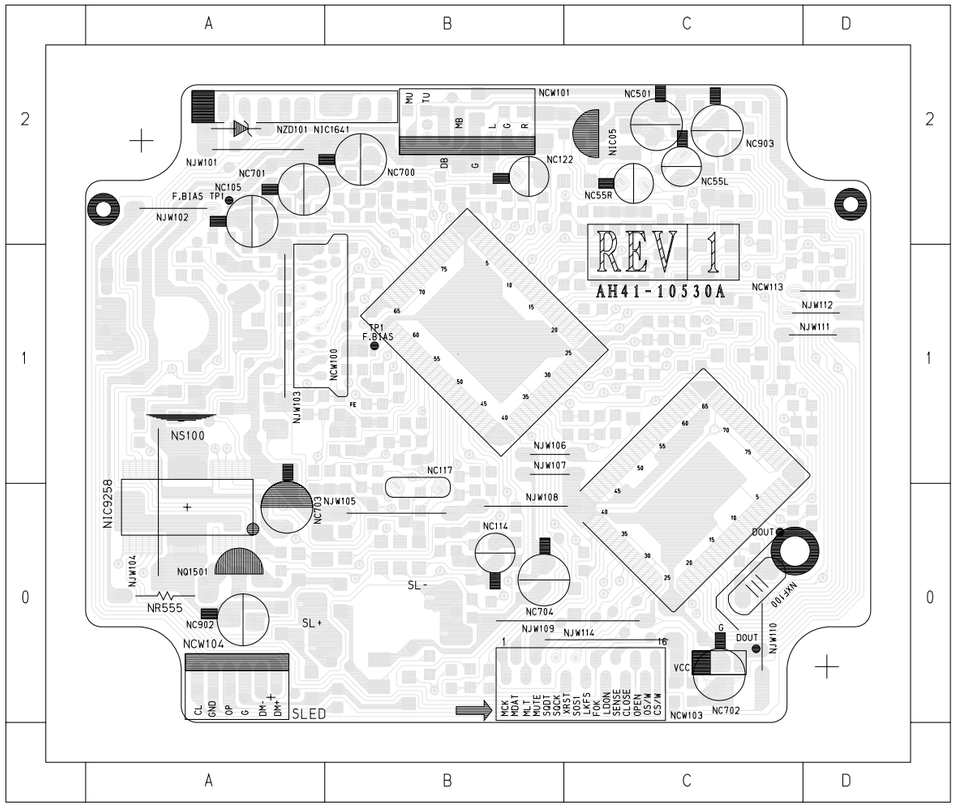
UQ1 (F2)
UQ10 (B1)
UQ11 (B1)
UQ2 (D2)
UQ5 (F1)
UQ6 (F2)
UQ7 (F1)
UQ8 (F2)
UQ9 (B2)

*** IC&WAFER ***

UCW3 (I4)
UCW3-1 (H5)

10-3 CD

10-3-1 Main



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IC9286 (B0)
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NC102 (B2)
NC103 (B2)
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NC106 (B2)
NC107 (B1)
NC108 (B1)
NC110 (B1)
NC111 (B1)
NC112 (B1)
NC113 (B1)
NC115 (B0)
NC116 (B0)
NC117 (B2)
NC118 (B0)
NC119 (B1)
NC120 (C1)
NC121 (C1)
NC124 (C1)
NC125 (C1)
NC190 (A2)
NC200 (D1)
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NC201 (C0)
NC202 (C0)
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NC204 (C1)
NC205 (C1)
NC300 (C2)
NC301 (B2)
NC400 (C2)
NC500 (A2)
NC502 (C2)
NC50L (C1)
NC50R (C1)
NC52L (C1)
NC52R (C2)
NC53L (C1)
NC53R (C2)
NC54L (D1)
NC54R (C1)
NC602 (B0)
NC603 (B1)
NC800 (B0)
NC804 (B1)
NC901 (C0)
NC902 (C0)
NC903 (B1)
NC904 (A1)
NC905 (B0)
ND200 (C2)
ND201 (C2)
NJR102 (B2)
NJR103 (A2)
NJR104 (A2)
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NJR106 (C1)
NJR107 (C1)
NJR108 (C1)
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NJR113 (B0)
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NJR118 (B1)
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NJR129 (C2)
NJR131 (B2)
NJR132 (B2)
NJR133 (A1)
NJR134 (A1)
NJR135 (A1)
NJR136 (A1)
NJR137 (A1)
NJR138 (A1)
NJR139 (A1)
NJR140 (A1)
NJR141 (A1)
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NJR143 (A0)
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NJR145 (B0)
NJR146 (A0)
NJR147 (A0)
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NJR151 (C0)
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NJR156 (C1)
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NJR302 (C2)
NJR303 (C2)
NJR304 (C2)
NJR305 (C2)
NJR306 (C1)
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NJR308 (B2)
NJW320 (B2)
NL100 (B0)
NL300 (D2)
NL301 (C2)
NL302 (B2)
NL303 (A0)
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NR100 (B2)
NR101 (A1)
NR102 (A1)
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NR103 (B1)
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NR108 (B1)
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NR114 (C1)
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NR116 (B2)
NR117 (B2)
NR118 (B1)
NR119 (C1)
NR120 (B2)
NR121 (B2)
NR200 (C1)
NR201 (C0)
NR202 (C1)
NR203 (C1)
NR204 (C1)
NR300 (C1)
NR400 (B0)
NR401 (B1)
NR50L (C1)
NR50R (C2)
NR52L (C1)
NR52R (C2)
NR53L (C1)
NR53R (C2)
NR54L (C1)
NR54R (C2)
NR55L (C1)
NR55R (C2)
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NR56R (D1)
NR57L (B2)
NR57R (C2)
NR601 (B1)
NR602 (B1)
NR603 (B1)
NR604 (B1)
NR606 (B0)
NR804 (B0)

*** CONDENSER ***

NC105 (A2)
NC114 (B0)
NC117 (B0)
NC122 (B2)
NC501 (C2)
NC55L (C2)
NC55R (C2)
NC700 (B2)
NC701 (A2)
NC702 (C0)
NC703 (A0)
NC704 (B0)
NC902 (A0)
NC903 (C2)

*** RESISTOR ***

NR555 (A0)

*** DIODE ***

NZD101 (A2)

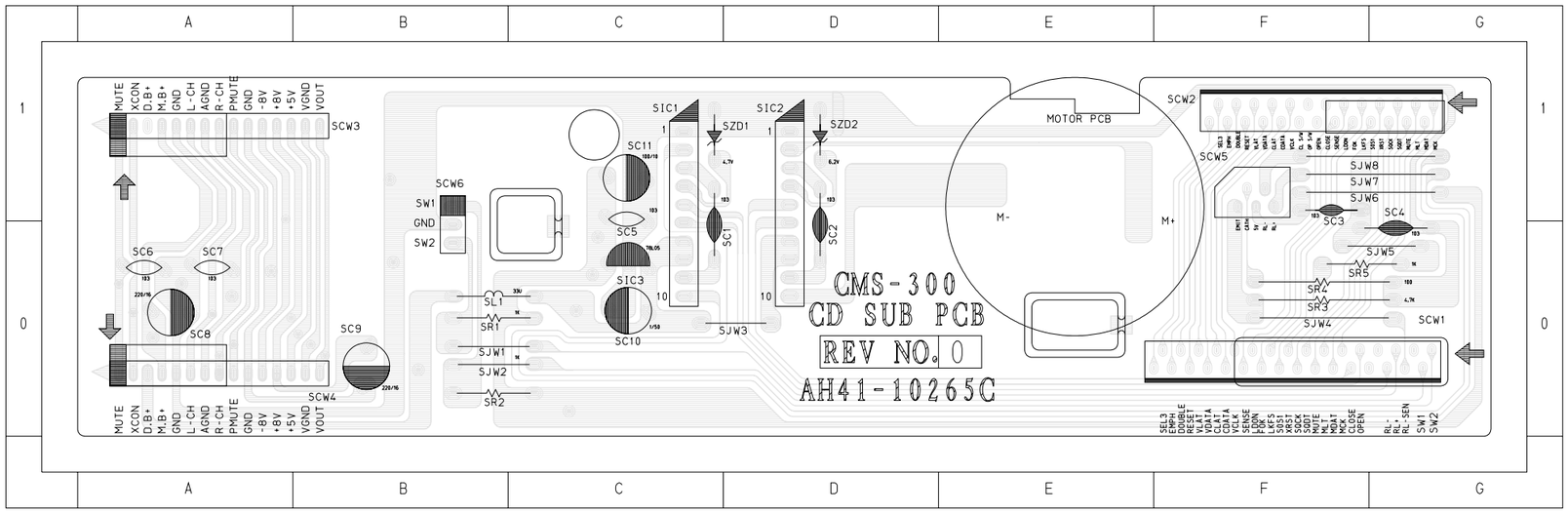
*** TR ***

NIC05 (C2)
NQ1501 (A0)

*** IC&WAFER ***

NCW101 (B2)
NCW104 (A0)
NIC1641 (A2)

10-3-3 SUB



*** RESISTOR ***

SR1 (B0)
SR2 (B0)
SR3 (F0)
SR4 (F0)
SR5 (F0)

*** CONDENSER ***

SC1 (C0)
SC10 (C0)
SC11 (C1)
SC2 (D0)
SC3 (F1)
SC4 (F0)
SC5 (C1)
SC6 (A0)
SC7 (A0)
SC8 (A0)
SC9 (B0)

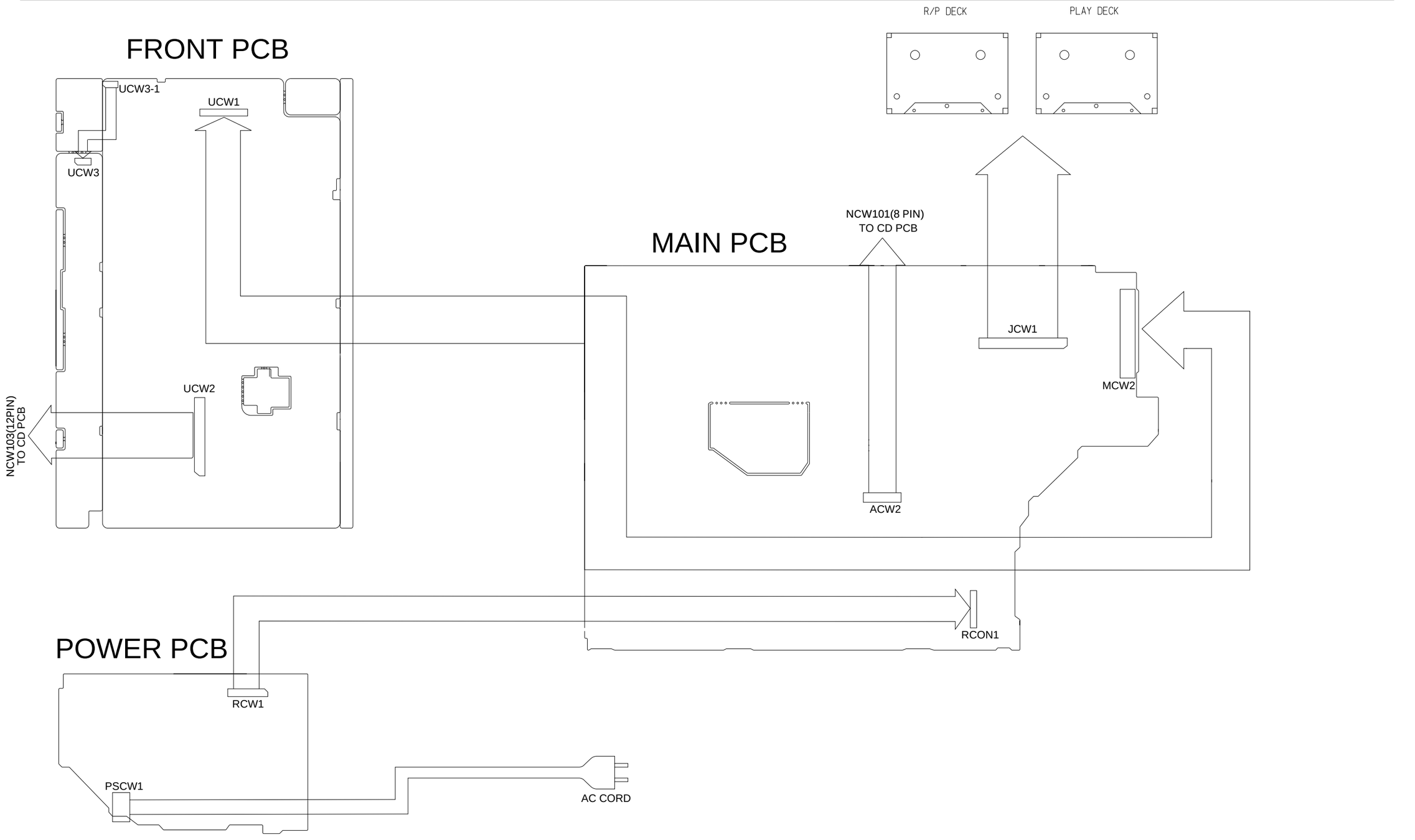
*** DIODE ***

SZD1 (C1)
SZD2 (D1)

*** TR ***

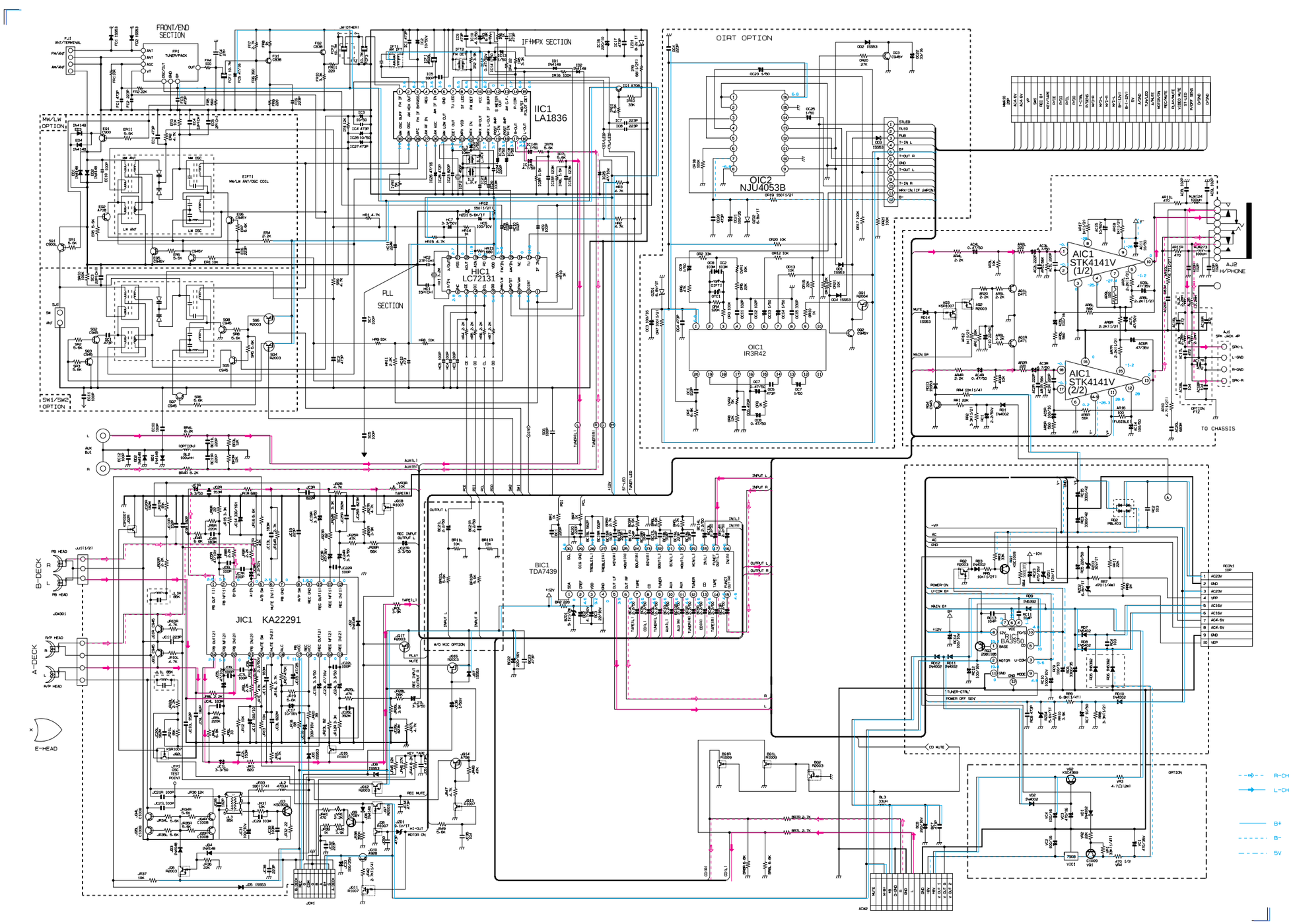
SIC3 (C0)

11. Wiring Diagram

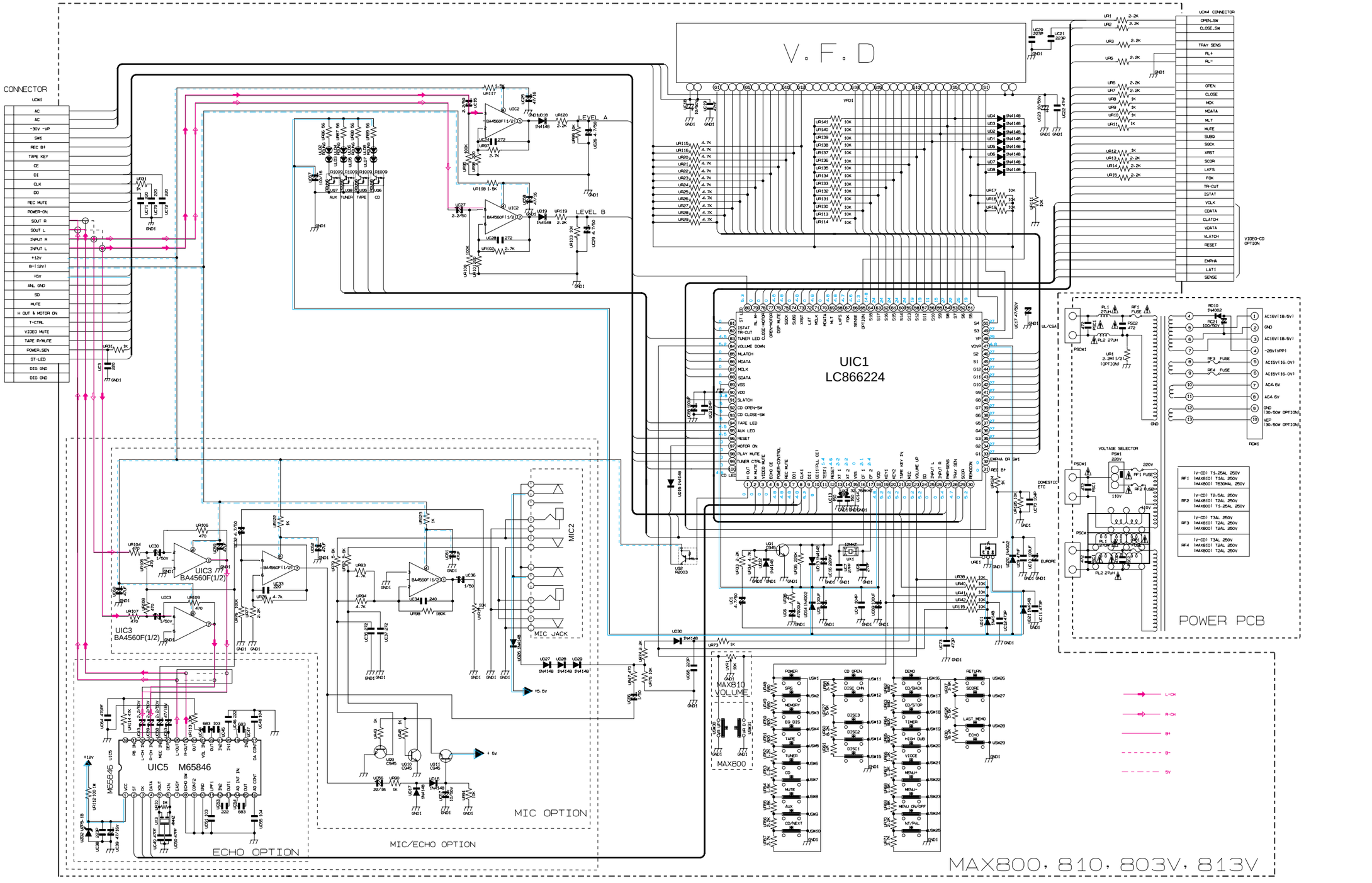


12. Schematic Diagrams

12-1 Main

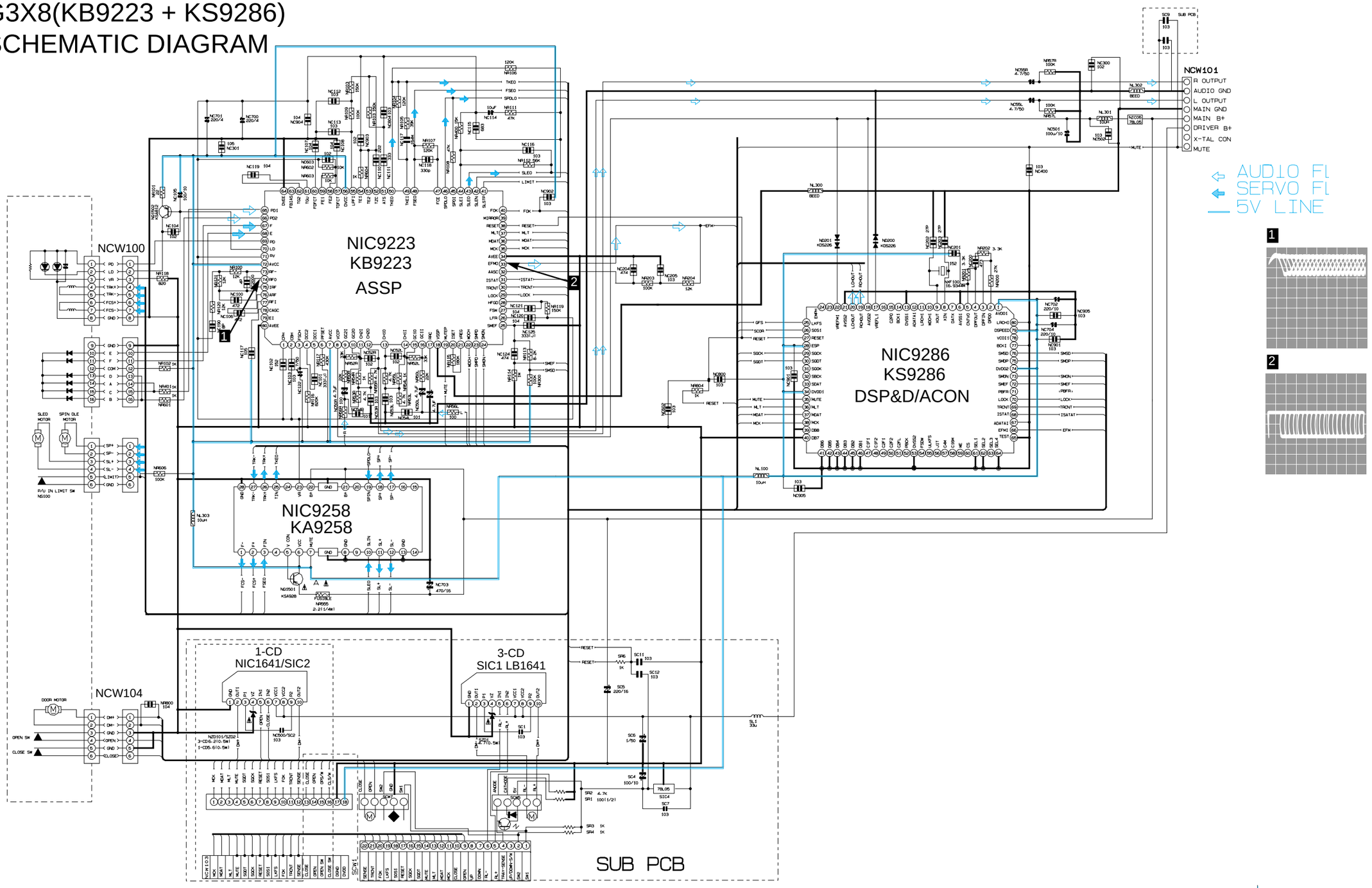


12-2 Front


V.F.D
UIC1
LC866224
UIC3
BA4560F(1/2)
UIC5 M65846
MAX810
VOLUME
MAX800
MIC JACK
MIC2
MIC OPTION
MIC/ECHO OPTION
ECHO OPTION
POWER PCB
MAX800, 810, 803V, 813V
CONNECTOR
VOLTAGE SELECTOR
L-CH
R-CH
B+
B-
5V

12-3 CD

G3X8(KB9223 + KS9286)
SCHEMATIC DIAGRAM



Voltage Table

IC Name	KB9223		KB9223		KA9258	
No.	STOP MODE	PLAY MODE	STOP MODE	PLAY MODE	STOP MODE	PLAY MODE
1			5V	5V	2.5V	4.5V
2					2.5V	4.5V
3					2.5V	2.5V
4						
5					8V	8V
6			0V	0V	5V	5V
7	5V	5V			5V	5V
8			2.5V	2.5V	0V	0V
9						
10					2.5V	2.5V
11					2.5V	4.5V
12					2.5V	4.5V
13			0V	0V	0V	0V
14						
15						
16						
17			2.5V	2.5V	2.5V	4.5V
18	0V	0V	5V	5V	2.5V	4.5V
19	5V	0V			2.5V	2.5V
20						
21			0V	0V	8V	8V
22			2.5V	2.5V	8V	8V
23					2.5V	2.5V
24	0V	5V				
25			0V	5V	2.5V	2.5V
26					2.5V	4.5V
27					2.5V	4.5V
28			0V	0V	0V	0V
29						
30						
31						
32						
33						
34	0V	0V	5V	5V		
35						
36			5V	0V		
37						
38	0V	5V				
39			0V	0V		
40	0V	5V	0V	0V		

IC Name	KB9223		KB9223	
No.	STOP MODE	PLAY MODE	STOP MODE	PLAY MODE
41			0V	0V
42			0V	0V
43			0V	0V
44			0V	0V
45			0V	0V
46			0V	0V
47				
48				
49				
50				
51				
52				
53			0V	0V
54				
55				
56	5V	5V		
57				
58				
59				
60				
61			0V	0V
62			0V	0V
63				
64	0V	0V	0V	0V
65			0V	0V
66				
67			0V	0V
68				
69				
70	5V	3.8V		
71	2.5V	2.5V		
72	5V	5V		
73			0V	5V
74			5V	5V
75				
76				
77			0V	0V
78				
79			5V	5V
80	0V	0V	0V	0V

SERVICE BULLETIN

ProDuct : AUDIO	Bulletin No. : 98-AUD-E0003
MODEL : See below	Bulletin Date : Aug 14.1998
Buyer : See attachment	ECN & data : Aug 13.1998

SUBJECT : Service Guide for model employed the new speaker

- Application Models : MAX-805,818,838,858(R),868,878,888,858P

Background : Change to new speaker(SS-SPK)

Cause : Change to model name

Solution : Refer to old Service Manual for the service(See below table)

Application Date : Running Change

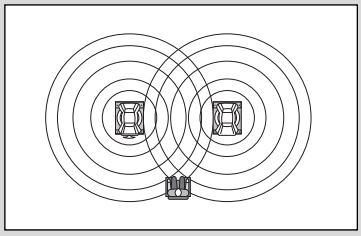
NO	Old Model Name	New Model Name	Service Manual Code No	Change area	Remark
1	MAX-800	MAX-805	AH68-20181A	PS-445 use	-Refer to old Service Manual for the service.(common)
2	MAX-810	MAX-818	AH68-20173A	SS-SPK use	
3	MAX-820	MAX-828	AH68-20186A	SS-SPK use	
4	MAX-830	MAX-838	AH68-20186A	SS-SPK use	
5	MAX-850(R)	MAX-858(R)	AH68-20176A	SS-SPK use	-Space Surround Speaker (SS-SPK)
6	MAX-852P	MAX-858P	AH68-20195A	SS-SPK use	
7	MAX-860	MAX-868	AH68-20176A	SS-SPK use	⇒ Refer to next page
8	MAX-870	MAX-878	AH68-20177A	SS-SPK use	
9	MAX-880	MAX-888	AH68-20177A	SS-SPK use	

Attachment Schematic Diagram ( ) Component Lay-out ( ) Schematic Diagram ( )
Mechanical Diagram( ) None ( ) Others (o)

Published by :	Checked by :	Approved by :

To get the most effective stereo sound

- If possible, position the height of the tweeter of the speaker system at the same height of the ears of the listener to enjoy richer sound.
- It differs according to the structure of the room. Place the speakers at the various positions to find out the optimum position. Then you will enjoy better sound.

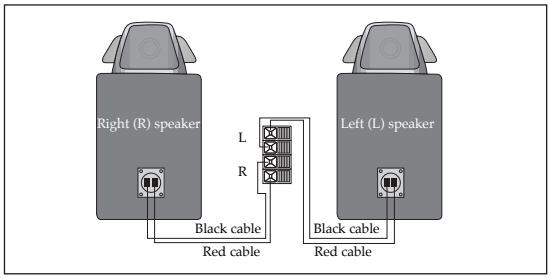


Maintenance

- Clean the system with a soft cloth applied with mild detergent or water.
- Do not use thinner, alcohol, or benzene, which peels off the paint or makes stains on the surface.

Connecting the speakers

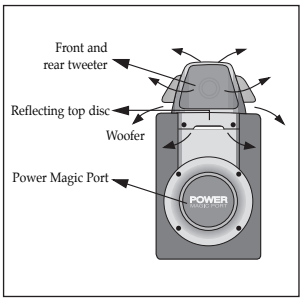
- Turn the power of the amplifier off before connecting the speakers.
- Connect the speakers using the cable enclosed with the speakers as the figure shown below. The red cable should be connected to the red terminal on both the speaker and the amplifier and the black cable to the black terminal on both. Besides, the left(L) and right(R) should be matched.
- Connect the speaker cable to the terminal accurately. If it is connected inaccurately, there may be no sound or noisy sound. Furthermore, if the +, – cables touched each other, the amplifier may be damaged.
- If the polarity of the connection is reversed, the sound quality will be lowered badly and the stereo sound will not be produced owing to the phase condition of the left and the right. Take great care to connect the speakers in phase.



About the 360° Space Surround

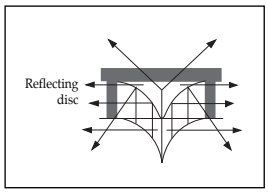
The 360° Space Surround Speaker System

- reproduces the sound of the musical instrument more naturally than the regular speakers.
- It is because that this speaker system reproduces the sound on the same principle as the resounding of the musical instrument.



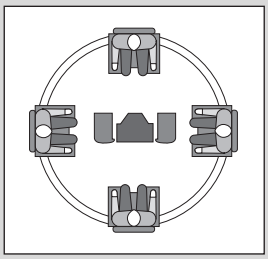
Reflecting top disc

- reflects the sound uniformly in all direction. Therefore, you can hear the same sound all around the speaker system.



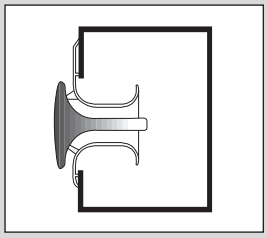
The 360° Space Surround Speaker System

- provides all the listeners around the speaker system with the same quality and volume of the sound.



Power Magic Port™

- reproduces the rich and dynamic bass sound. Especially, by the dynamic range of the medium and low frequency response, the noise generated through the port is reduced effectively to reproduce the clear bass sound.



※ Power Port™ is the patent of Polk Audio in U.S.A. Samsung Electronic has the manufacturing license to produce it.

*Note : Design and Specfication are subject to change upon improvement without prior notice.